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REPORT

OF THE

MUNICIPAL BOARD

OF THE

CITY OF MANILA

FOR THE

Fiscal Year Ending June 30, 1903.



MANILA:

BUREAU OF PUBLIC PRINTING.

1904.



TOPOGRAPHICAL MAP OF THE CITY OF MANILA.

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Manila Municipal Board

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REPORT OF THE MUNICIPAL BOARD OF THE CITY OF MANILA FOR THE FISCAL YEAR ENDING JUNE 30, 1903.

MUNICIPAL BOARD OF MANILA,

Manila, P. I., October 1, 1903.

SIRS: In compliance with the provisions of section 14 of Act No. 183, Philippine Commission (the Manila Charter), the Municipal Board of the City of Manila hereby submits its report of the operations of the city of Manila for the fiscal year 1903.

With the exception of the enactment of ordinances, letting of contracts for such matters as related particularly to the Municipal Board or the cost of which was of such amount as to require consideration by both the Municipal and Advisory Boards, and the settlement of questions which pertained to no particular department of the city government, the work of the Board was so closely connected with the various departments that mention thereof will be made under the heads of various departments.

The personnel of the Municipal Board at the end of the fiscal year 1902—namely, president, Arsenio Cruz Herrera; member, P. G. McDonnell; temporary member, A. L. B. Davies; and acting secretary, Bert Eddy—remained the same until December 29, 1902, when Member Charles H. Sleeper returned from leave of absence in the United States and resumed his duties on the Board, relieving Mr. Davies, who resumed his duties as secretary, he in turn relieving Mr. Bert Eddy, who resumed his duties as chief clerk. On March 10, 1903, Mr. A. L. B. Davies resigned the position of secretary of the Board to accept appointment as local purchasing agent of the Insular Government. Mr. O. F. Ricard, clerk Municipal Board, was appointed acting secretary and continued in that position until May 1, 1903, when Mr. John M. Tuther, the present incumbent, was appointed secretary.

During the fiscal year the Municipal Board met daily except Sundays and holidays, as provided by the City Charter, and 304 sessions were held at which 7,380 items of municipal business were considered. For the purpose of presenting the entire work of the administration of the city this report is submitted under the following subheads:

Advisory Board; Secretary of the Municipal Board; Disbursing Officer; Department of Engineering and Public Works; Department of Police; Law Department; Fire Department; Department of Assessments and Collections; Department of City Schools.

FINANCES.

As exhibits to these reports are submitted the reports of the heads and subheads of these departments.

ADVISORY BOARD.

On August 15, 1902, the United States Philippine Commission amended the Manila Charter by increasing the number of city districts to thirteen and providing for the representation of the districts of Santa Ana and Pandacan upon the Advisory Board of the city of Manila. the Board held its regular meeting once every two weeks, as prescribed in the Charter, until December 31, 1902, on which date the Commission further amended the Charter to provide for the holding of meetings once a week. This action was taken upon the recommendation of the Municipal Board, concurred in by the Advisory Board, and was considered necessary in order to expedite the business and provide for the prompt return of matters referred to the Advisory Board for its consideration. All ordinances have been passed upon by the Advisory Board before final action by the Municipal Board, and all expenditures amounting to \$10,000 and over have been submitted to it for its approval, and in many cases where smaller amounts were involved action was deferred until its opinion thereon had been expressed. In all 97 items were referred to the Advisory Board, some of these references being required by the provisions of the Charter, while others were forwarded in order that the Municipal Board might profit by the opinion of an intelligent body of Filipinos acting in closer conjunction with the general public. Many other matters of importance have originated with the Advisory Board and received the careful attention of the Municipal Board. In certain matters relating to the sanitation of the city and the ordinances governing the construction of buildings, the Municipal Board has not fully concurred in the recommendations of the Advisory Board. From time to time, conferences have been held by the two boards and by committees from the boards, and, in general, the result has been beneficial and the conferences have served to clear up matters over which differences of opinion have arisen.

The Municipal Board wishes to acknowledge the valuable coöperation and assistance which was rendered by the Advisory Board at the time of the great conflagration in the district of Trozo, where 3,000 nipa dwellings were destroyed with a loss of \$125,000, rendering 15,000 people homeless. The city was obliged to support a large percentage of these homeless people for nearly a month by distributing gratis rice and meat. Members of the Advisory Board were constantly on the ground and materially assisted the police in the system of distribution.

The members of the Advisory Board are: Señor Miguel Velasco president, San Miguel; Señor Basilio Reglado Mapa, Intramuros;

Señor Juan Tuason, Quiapo; Señor José Paterno, Santa Cruz; Señor Tomas Arguelles, Sampaloc; Señor Teodoro R. Yango, Binondo; Señor Rogaciano Rodriguez, San Nicolas; Señor Crispulo Feliciano, Tondo; Señor Antonio Ma. Pabalan, Paco; Señor Vicente N. Somoza, Malate; Señor José R. Ynfante, Ermita; Señor Segundo Rodil, Santa Ana; Señor Francisco Rosario, Pandacan; Señor Vicente Rodriguez, secretary.

SECRETARY OF THE MUNICIPAL BOARD.

On March 9, 1903, Mr. A. L. B. Davies resigned the position of secretary of the Board to accept the appointment as local purchasing agent for the Insular Government. Pending the appointment of his successor Mr. O. F. Ricard, a clerk of the Board, was designated as acting secretary and continued in that position until May 1, when the Board appointed Mr. John M. Tuther, who has remained at the head of the office since that date. With the increase of the general municipal business the work of this office has been greatly extended, and a detailed report of the work of the year is submitted herewith.

DISBURSING OFFICER.

The disbursing officer of the Municipal Board, Mr. R. C. Baldwin, has handled during the year something over \$1,500,000 in a most satisfactory manner. All payments have been made promptly, and the salaries of the 4,250 city employees are all paid by the 10th of each month, and nearly all other items of expense on demand. In addition to the work of disbursing officer this officer is also, by direction of the Board, acting as comptroller of the city, and keeping records which are of value to the board for statistical purposes.

Attention is invited to the complete report in detail of the disbursing officer.

DEPARTMENT OF ENGINEERING AND PUBLIC WORKS.

Aside from an unusually large amount of routine work accomplished by the Department of Engineering and Public Works, the Board is pleased to announce two exceedingly important improvements which will especially mark the fiscal year just ended. These are the granting of franchises for an electric railway and an electric light, heat, and power system in the city of Manila and its suburbs, and the preparation of plans, surveys, and a complete study of a new water system.

On October 20, 1902, the Commission passed an act providing for the granting of a franchise to construct an electric street railway on the streets of Manila and its suburbs and a franchise to construct, maintain, and operate an electric light, heat, and power system in the city of Manila, after competitive bidding. It is a condition of the franchises that the person to whom they may be originally granted under the provisions of the act shall, before April 1, 1903, form a corporation under

the laws of the Philippine Islands hereafter to be passed, or the laws of the United States, or of any State thereof. The bidders were required to deposit as an evidence of good faith the sum of \$75,000, in the money of the United States, with the Treasurer of the Archipelago, and the successful bidder was required to deposit \$175,000 upon the awarding of the franchise. It is a condition of both franchises that the grantee shall begin the construction of the road within six months from the date of the granting of the franchise and shall complete the construction of the road and commence the operation of same within twenty months after the expiration of the said period of six months, and shall complete the construction of so much of the electric light, heat and power system as shall be coextensive with the lines of the street railway to be constructed under the first-mentioned franchise, and to commence the operation of the same within twenty months thereafter.

Due advertisement for competitive bidding for the proposed franchises was made in three newspapers printed in the English language and two printed in the Spanish language in the city of Manila, in two newspapers in the city of New York, in one newspaper in the city of Chicago, and one in the city of Washington, by two insertions per week for six weeks after the passage of the act and a single insertion per week for the subsequent six weeks. There was also a weekly insertion for the six weeks following the passage of the act in a leading street-railway journal in the United States. The text of the law, upon its passage, was immediately forwarded to the Bureau of Insular Affairs of the War Department, together with a copy of the map of the city showing the projected routes, and this remained on file in that Bureau for the information of bidders in the United States. Similar information was kept on file in the office of the Municipal Board of the city of Manila.

On the 5th day of March, 1903, the Municipal Board declared the time expired and opened the only bid submitted, which was in the name of Charles M. Swift, as follows:

JANUARY 12, 1903.

GENTLEMEN: I beg leave to submit the following bid for a franchise to construct an electric street railway on the streets of Manila and its suburbs and a franchise to construct, maintain, and operate an electric light, heat, and power system in the city of Manila and its suburbs, proposed to be granted by you after competitive bidding under and in accordance with an act of the Philippine Commission enacted October 20, 1902, and entitled "An act providing for the granting of a franchise to construct an electric street railway on the streets of Manila and its suburbs and a franchise to construct, maintain, and operate an electric light, heat, and power system in the city of Manila and its suburbs after competitive bidding," on the following terms:

I agree that if the franchise is awarded to me I will comply with all the terms and conditions of the franchises set forth in said act, provided—

(1) That the duration of the franchise shall be fifty years.

(2) That the fares to be charged on the street railway shall be as follows: Single fares, first-class cars, 6 cents; second-class cars, five cents. First-class-

ticket fares to be sold under paragraph 17, at the rate of 100 for \$5.50, and second-class-ticket fares at the rate of 6 tickets for 24 cents.

(3) The percentage of gross receipts to be paid to be $2\frac{1}{2}$ per cent of the fares collected and tickets sold on the street railway, and $2\frac{1}{2}$ per cent of the gross earnings of the electric light, heat, and power plant.

It is, of course, understood if my bid is accepted I will cause to be formed a corporation, as provided in the act, to whom the franchise will be transferred.

Very truly yours,

CHAS. M. SWIFT.

The MUNICIPAL BOARD OF THE CITY OF MANILA.

On March 24, 1903, an ordinance was enacted by the Municipal Board granting both franchises to Charles M. Swift. Soon after this the first engineers appeared on the ground and commenced active work in surveys of the city and in general preparations for construction, and there is every reason to believe that the people of Manila will soon enjoy the most modern and best-equipped electric railroad and electric light and power system.

Owing to its peculiar location and great area covered by the city, the question of transportation is one of the most serious that is encountered, and for years the people have been put to great inconvenience and heavy expense in relying upon the antiquated, short horse-car system and the poorly constructed, unsatisfactory, and generally undesirable system of public vehicles. These conditions have very much retarded the growth of the city and have tended to congest the population. The outlying districts in nearly every direction from the crowded centers are more desirable for residence sites by reason of the higher ground, and it is expected that as soon as the railroad is put into operation many of those now paying high rents for small, unhealthy quarters will take advantage of this quick transportation and secure comfortable dwellings in better localities.

The granting of this franchise, with the assurance of all it means, is regarded as one of the most favorable events marking the progress of the United States Government in the Philippines.

On February 1, 1903, Mr. J. F. Case was appointed engineer in charge of the preliminary work of the new water system, and he immediately commenced a study of the present system and the needs of the city. Certain data prepared by the Spanish Government and the engineers of the United States Army was placed at his disposal. All possible sources of supply were carefully examined, and the head waters of the Mariquina River and the adjoining watershed in the Province of Rizal were found to constitute the only source giving a sufficient flow of water. The Mariquina River rises in the mountains directly east of Manila and finally, breaking through the first range of mountains nearest to Manila, flows into the Mariquina Valley. From its source to the town of Montalban its watershed is an almost impenetrable forest, and, with the

exception of the site of a small town, the valley is almost uninhabited, but from Montalban to the mouth of the river the valley is densely populated with several large towns along the bank of the river itself.

It has been found necessary to maintain a vigilant quarantine system through the means of the Army, prohibiting the inhabitants from bathing in the water and from littering the banks with such refuse and excrement as might endanger its purity.

The report of Mr. Case, herewith attached, does not include the distribution system within the city of Manila, but covers the gathering of the waters into a dam and reservoirs and the introduction of the same into the mains at the city limits. Gaugings taken with a weir during the season of low water give a minimum daily flow of approximately 11,000,000 gallons, and it is considered by Mr. Case that this may be assumed as the minimum flow for the very driest years. Two propositions have been submitted for the location of the dam, one being further into the valley than the other and at a higher level, and these and other questions of so important a nature will be a subject for final review and recommendations of a board of engineers to be appointed by the Municipal Board for the purpose of carefully reviewing the submitted project. It is estimated that the entire gravity system can be completed within two years and ten months at a cost of \$1,400,000. When the plans are finally approved they will be forwarded to the Commission for its approval and the necessary authority for the issuance of the bonds provided for this purpose in the act passed during the last session of Congress.

With such a system as this the city will enjoy a magnificent water supply sufficient for all needs and capable of accommodating a rapidly growing population for at least twenty years.

The present water supply has been greatly improved during the last year. The pumping station at Santolan, 6 miles from Manila, has been thoroughly overhauled. New buildings have been erected for the accommodation of employees and the entire plant has been repaired. Many of the old moving parts of the engines, which have been in bad condition for months and in some cases even years, have been removed and replaced with new ones. The road from El Deposito through the pumping station, over which must be hauled all the coal, has been a source of considerable expense, but this year, even in the rainy season, it is in very fair condition. In July, 1902, the dam showed signs of weakness with the high water resulting from the first rains. This dam has been replaced by a new one which promises to last, with ordinary repairs, for several seasons.

The supply system within the city's limits has been carefully overhauled, and many new boxes of superior design have been substituted for the old square street boxes, and several of the old hydrants have

been replaced by new post hydrants. The superintendent of the water supply has made a study of a special street-sprinkling service and a high-pressure fire service, which is outlined in the detailed report of the work of the Engineer Department herewith.

The Board has approved the purchase of \$50,000 worth of pipe for extensions, and this is of such dimensions and will be laid in such manner as to be readily included in the new water system.

Three large and valuable sections of the city have been included in a general scheme of street extension, and the plans submitted herewith have been approved by the Board. This will open up to building desirable sections of residence property in Ermita and Malate and business and residence property, largely inhabited by Filipinos, in Trozo. The system provides wide streets admitting of sidewalks and a small space for trees or parking. Sidewalks in Manila are almost unknown, and the advantages to be gained from trees in a tropical country can not be overestimated, and yet, with a very few exceptions, this seems to have been overlooked by the Spanish Government. As a rule, the new streets have been planned with a width of 15 meters, and a boulevard with a width of 30 meters has been approved, to run from near the intersection of Calle Concepcion and Paseo de Bagumbayan in front of the site of the new city hall building through Ermita and Malate to the city limits. At the present time there is no avenue by which people of these two districts can reach the center of the town, and traffic is very much hampered in its struggles through the narrow streets of Real and Nueva on one side and Nozaleda on the other.

The pavement of the city consists of granite blocks, wood blocks, and macadam. The torrential rains and the extreme heat of the sun rapidly destroy almost any class of pavement, and the work done by the department covers almost every street in the city, many of which have been resurfaced, curbed, and provided with gutters and drains. The broad Bagumbayan drive has been completely resurfaced. One thousand three hundred and eighty-two meters of fine driveway, forming a loop along the Pasig River and around the church of Santa Ana, and 307 meters from the Bridge of Las Damas into the town of Santa Ana, have been constructed, leaving a parking space in the center of the district of Santa Ana. This point lies at a considerable distance from the center of Manila and contains many fine residences, and the improvement of the road, which is now really a narrow boulevard, has been very much appreciated. The widening of the Santo Domingo gate, commenced during the last fiscal year, has been completed, and the advantages of a broad entrance to the Walled City are so great that many of those having business in the Government buildings, or attending the numerous churches, prefer to drive some distance in order to avoid the inconvenience of being delayed at the narrow entrances.

Thirty prisoners from Bilibid were placed at work on the north wall of the city along the Pasig River and several of the casements have been demolishd, the stone taken therefrom being used in building operations and at the city stables and crematory, while the earth and filling have been valuable in street work. These prisoners have been guarded by a detail from the Police Department and returned to the prison each night. The Board has approved an increase in the number of prisoners to be so employed and anticipates using 200 in its quarries at Talim Island.

The Bridge of Spain has been completely repaved with Australian wood blocks, laid on a bed of concrete. The wood has given good service during the short period of use, though it is too slippery to be satisfactory on the approaches, which must be constantly sprinkled with gravel in order to give a foothold. Plans were prepared for the removal of the two main spans of the Bridge of Spain and the substitution therefor of a lift bridge. Two types of lift bridge were submitted, at an estimated cost of approximately \$140,000. Between the Bridge of Spain and the Santa Cruz Bridge, on the south side of the river, there are 700 feet of ground which could be readily made available for dock purposes and on the north side there are 1,000 feet, but only a small portion of the north side would be available for water traffic under present conditions, as the buildings extend to the river bank for almost the entire distance. Should the Bridge of Spain be remodeled, permitting the passage of deep-water vessels, these additional docking advantages could be enjoyed. The Board has not yet adopted these plans. The low spans of the Bridge of Spain are a serious hindrance to traffic even at the present time, and some measures must be taken to facilitate water traffic even though not so extensive as indicated above. The numerous accidents to the Ayala Bridge have caused the Board to consider the question of removing the section under which launches and their tows pass, viz, that portion between the Isla de la Convalencias and the Germinal tobacco factory and the substitution therefor of a modern single-span bridge. This would remove a barrier from the river and leave a clear way for the passage of water craft to a section of undeveloped country lying along the south bank of the Pasig River, which is well suited for godowns and wholesale establishments and which is being rapidly improved.

The Board has directed the study of a scheme for providing boulevards on both sides of the river lying along the bay shore. At the present time there are practically no convenient driveways, except those leading to the Luneta, and these are constantly crowded. With the introduction of the street railway and its obstruction to driving, some of these few driveways well be rendered more or less undesirable and the need of other avenues will be steadily more noticeable. The

parks of the city have been very much improved and beautified. The zoological section of the Botanical Gardens has more than doubled during the year and now boasts a very fair collection of birds and animals. Its popularity is steadily increasing, especially with the Filipinos. Plans have been considered for a new propagating station and arboretum. The Board renews its recommendation for the allotment of more ground for parks and public playgrounds and athletic fields. The city has been ready to improve the Bagumbayan field and make it a most attractive public ground, but this and other large tracts of desirable land are claimed to a certain extent by the military authorities and until these questions can be settled the expenditure of the city's money thereon is not deemed expedient.

During the last few years the cemeteries have become crowded to the last degree. This is partly due to the heavy death rate from cholera and the plague. The Board is negotiating for the purchase of 50 hectares in the vicinity of La Loma and about 30 hectares near Santa Ana for cemetery purposes, and an appropriation covering the cost has been included in the estimate for the first half of the fiscal year.

The organization of the Department of Street Cleaning and Parks has been brought to a high standard of efficiency. A regular scale of promotion has been adopted and all advances are made from the ranks, and the men seem to be satisfied with their wages in spite of the several labor agitations which have affected the business community. Hand-carts have been introduced for street cleaning and patrol gangs have been organized to walk the beaches and banks of the river and esteros for the purpose of removing dead animals and offensive matter. A system has been devised, which will go into effect on July 1, for collecting all garbage and rubbish at night, thus eliminating the smells and unsightly heaps of refuse from the hours of daylight. According to the calculation of the superintendent the work is being done at a very low figure and is much cheaper than that of cities of equal size in the United States, an example being taken in the city of Washington. At the end of the last fiscal year all the garbage was burnt in two insufficient crematories or hauled to sea and dumped into the bay, and the stuff was frequently returned to the beaches with the incoming tide. Since that time a Morse-Boulger crematory of 120 tons daily capacity has been constructed on a plot of ground adjoining the city stables, and it is expected that it will be operating by the end of July.

The large addition to the city stables, built by contract at a cost of \$10,817.29, has greatly facilitated the work of all departments of the city requiring transportation. Despite the improved conditions of the well-ventilated and sanitary stables the percentage of disease affecting the stock is very large. The service done by some of the animals, notably those working in the dumps, where they are subject to wounds and

scratches, and those working in the heavy carts in the rain and sun, is so severe as to break down the best animals in a short time, even though they receive the best of care, unless suitable periods are given during which they may recuperate.

An experiment is to be tried with the importation of forty China mules, a requisition for which has already been sent to the Insular Purchasing Agent. These animals will cost very much less than the American mules, and it is claimed that they can do almost as much work.

During the month of May the offices of the city were removed from the rented building which has been occupied since the days of the military government to the Municipal School in the Walled City. This change was made at the earnest request of the church authorities, the owners of the building, which is to return again to the religious purposes for which it was constructed. The unfinished building, known as the Cosmopolitan Hospital and erected on ground leased from the city, was purchased at a cost of \$50,000, Mexican currency, less the cost of placing the structure in a proper condition for the continuation of the construction thereof. The plans are being prepared by the Insular Architect for the completion of this building for use as a temporary city hall until the Insular Government building is completed and the Ayuntamiento restored to the city.

The detailed report of the Superintendent of Buildings and Illumination shows repairs and improvements in almost every public building and in several rented buildings, and represents a large amount of work. The total amount of construction reported by this department amounts to \$105,417.95. This includes the addition to the Santa Cruz fire station, by contract; construction of a tenement house in San Nicolas, by contract; San Nicolas fire station, by contract; Arranque Market addition, by contract; addition to the city stables in Tondo, by contract; the Anda Market, by contract; the crematory at Paco, overhauled by day labor; the crematory at Santa Cruz, overhauled by day labor; the new crematory in Tondo, nearly completed, by contract; Gangalingin School, by day labor; the city pound, by contract, and the Paco police station, by contract.

The lighting service of the public streets and buildings has been increased and improved at a total cost of \$44,304.77.

The report of the inspection of private building indicates the greatest progress in all districts of the city. The tabulated statement submitted by the inspector of buildings shows at length the great activity in all lines of construction. Though the statistics of the last fiscal year were most encouraging, the number of applications for building permits in the fiscal year covered by this report shows an increase of about 87 per cent, while the number of permits issued has increased more than

114 per cent and the amount collected in fees more than 35 per cent.

During the year the following permits were issued:

Nature of application.	Number of permits.	Estimated value.
Strong materials:		
For buildings.....	873	\$1,946, 871
For repairs.....	519	171, 741
Light materials:		
For buildings.....	2, 242	189, 580
For repairs.....	702	26, 322

About 150 buildings were condemned and ordered removed. A very large number of nipa shacks which had passed the stage of possible repair or were in the districts of strong materials and, hence, according to the ordinance, were not permitted to be repaired, were removed, thus gradually clearing these dangerous spots from the districts of strong materials. The Board has exercised great leniency in dealing with the dwellers in these nipa huts, having frequently extended the time within which these structures must be removed, and, during the rainy season, when removal would work a hardship, even greater consideration was exercised.

This Board has approved the increase of the personnel of this office by one American inspector.

The city shops and storehouses, occupying an area of 156,218 square meters, have been thoroughly overhauled, repaired, and improved, and plans have been ordered prepared for the erection of a new shop to house the additional machinery now en route from the United States. The value of the shops has been very much increased, so that practically all repair work to the means of transportation used by the various departments is now done by the city laborers. A blacksmith and harness maker and the necessary help have been added to the equipment of the shops. All the cement curbing used in the street work is made at the shops, and money has been appropriated for the equipment of a new machine and woodworking shop.

Survey work has been carried on to a large extent in all parts of the city, giving for the first time an accurate record of street lines and grades and supplying necessary data for the water and sewer work. The proposed improvement to the Pasig River by straightening and filling in the bank and dredging between the Almacen and San Domingo gates has been carefully studied, and detailed plans and specifications for advertisement are being prepared. The removal of the city wall at this point is being done by the prison gang. Much progress has been made by one field party whose time has been devoted mainly to the survey necessary for the new drainage system. Attention is directed to the discussion of the proposed system submitted by the city engineer and attached to the end of his detailed report. The Board will recom-

mend the appointment of an engineer, whose duty it shall be to make a systematic study of the drainage system, and this work should be begun during the first half of the next fiscal year.

In connection with the report of the Department of Engineering and Public Works there is inserted an old and valuable map of the city of Manila as it was in the first years of the eighteenth century. This map was produced in Manila in the year 1730, and was removed to England by General Draper, who, in command of the British forces, captured the city in 1762. A photographic copy was made from the original in the British Museum by the Hon. T. H. Pardo de Tavera, a member of the Philippine Commission, by special permission of the British authorities, and through his courtesy the Board is able to present it in the Philippines for the first time in nearly a century and a half.

The annual report of the city engineer, with its various inclosures, submitted herewith, gives details of the work of the department for the year.

POLICE DEPARTMENT.

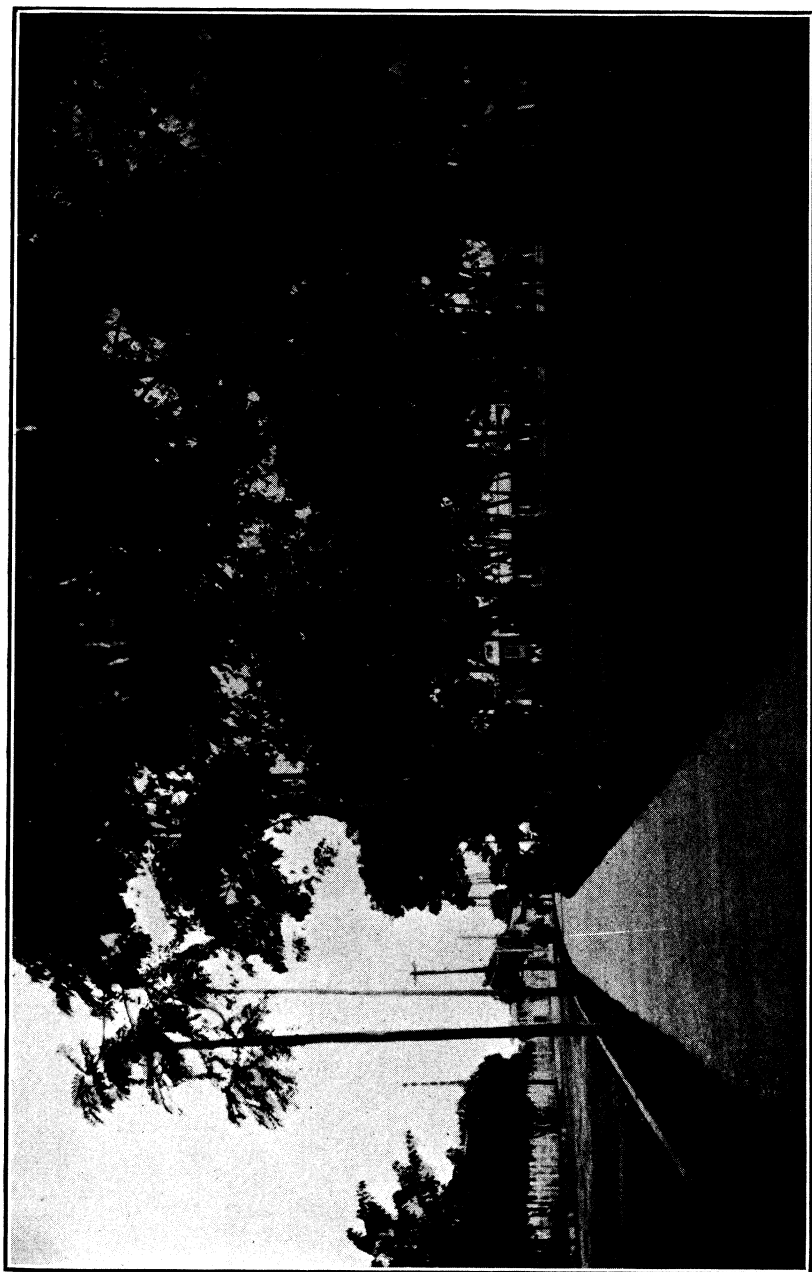
Many changes have taken place in the Police Department since the writing of the last annual report. These are largely the natural result of the experiments and experience of a formative period. Numerous men joined the force with the idea of retaining their positions until something better offered, and have used their spare time to prepare themselves in their various studies in order that they might take the examinations of the Civil Service Board for clerkships and employment in the other branches of the Government paying larger salaries.

The record of appointments and separation of patrolmen and non-commissioned officers shows:

Probational appointments	330
Discharges	325
Promotions	72
Total who have enjoyed accrued leave of absence.....	362

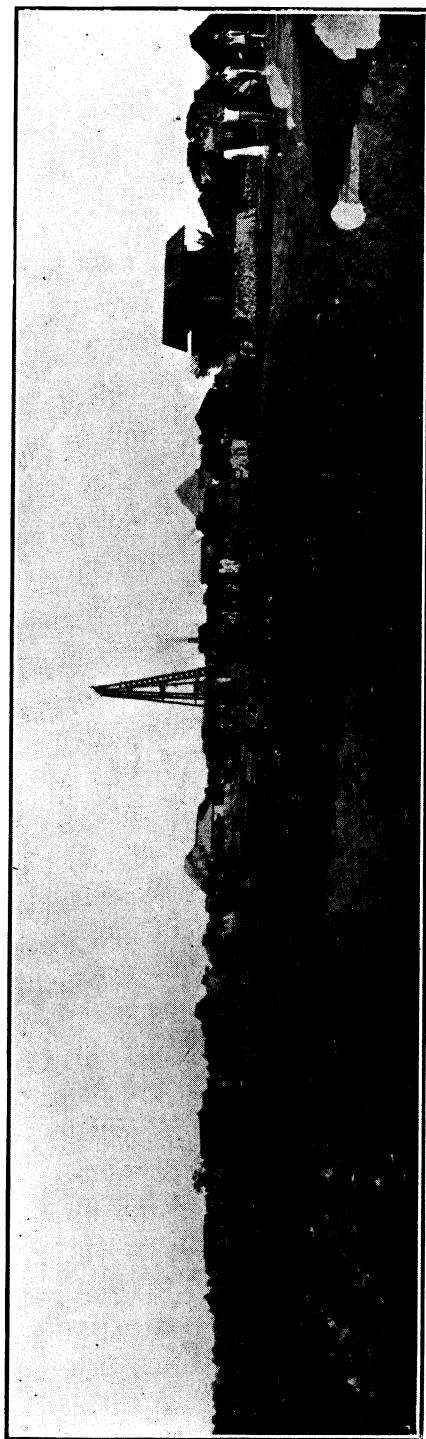
The number of discharges is almost half the entire force, which is out of all proportion and will be very much diminished in the future. These discharges are divided in the following manner:

Americans:	
By own request.....	109
For good of service.....	38
Total	147
Natives:	
By own request, failing to pass civil-service examination, etc	112
For good of the service.....	66
Total	178
Grand total	325

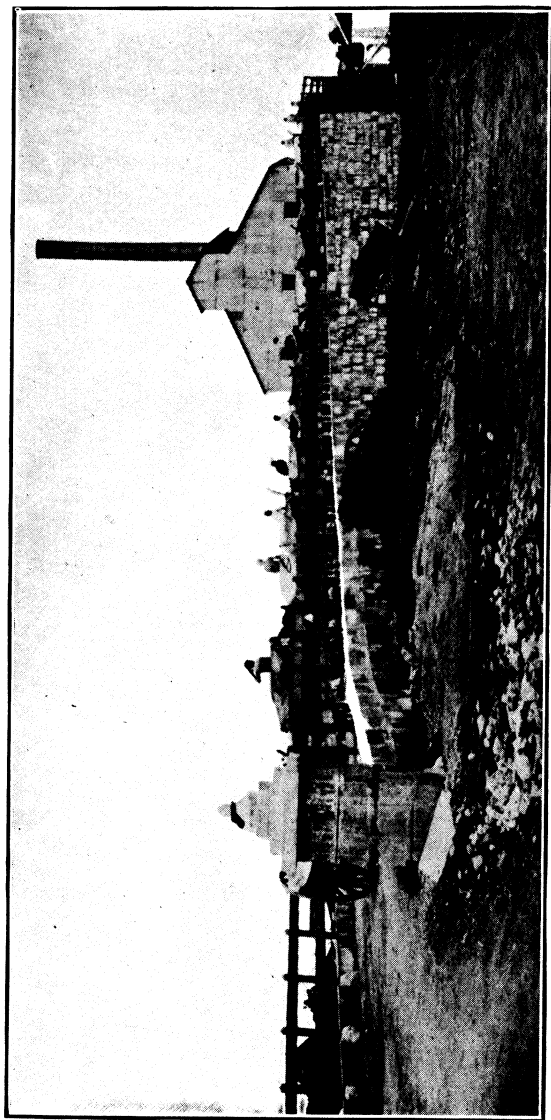


A CORNER OF THE BOTANICAL GARDENS, IMPROVED.

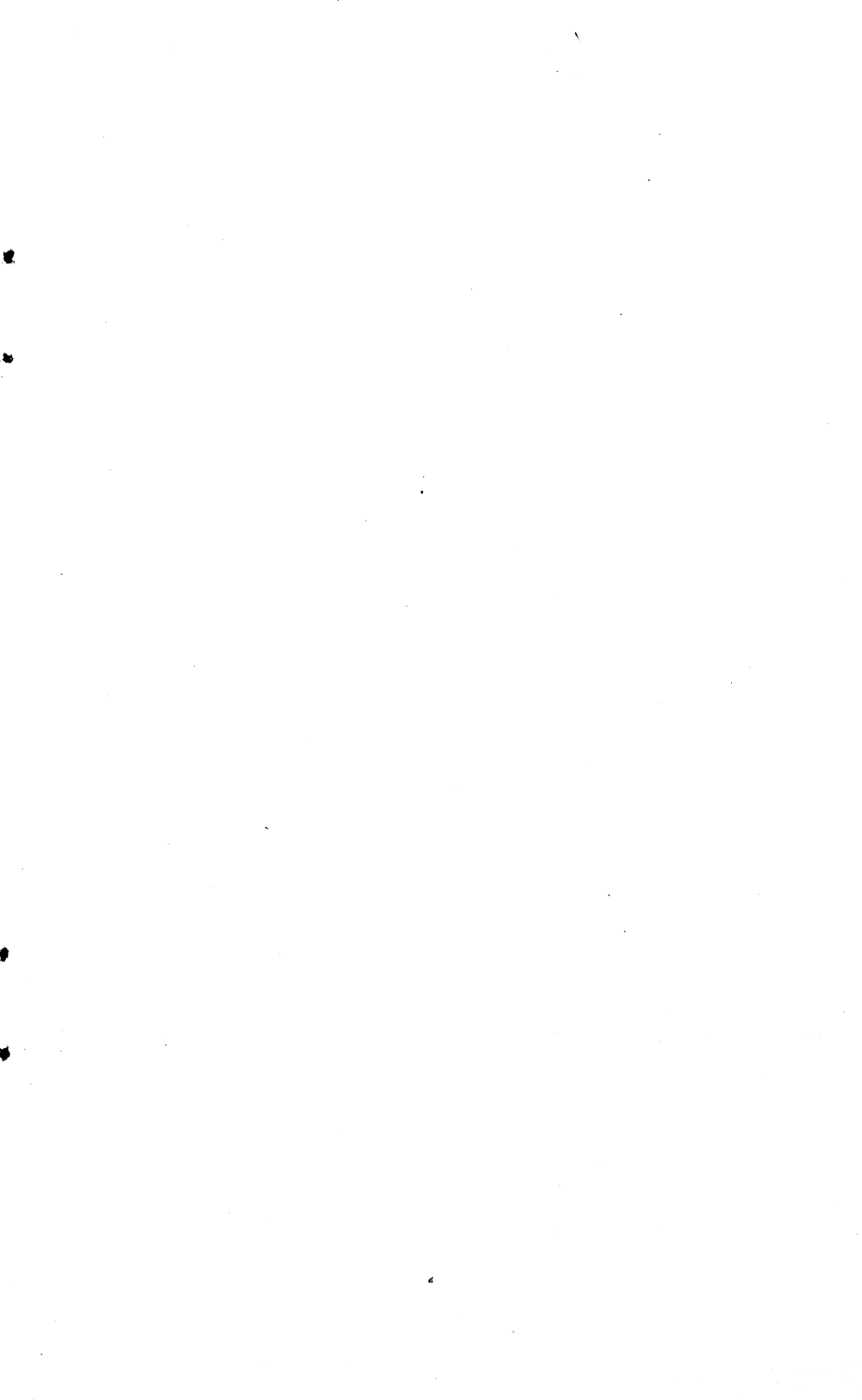


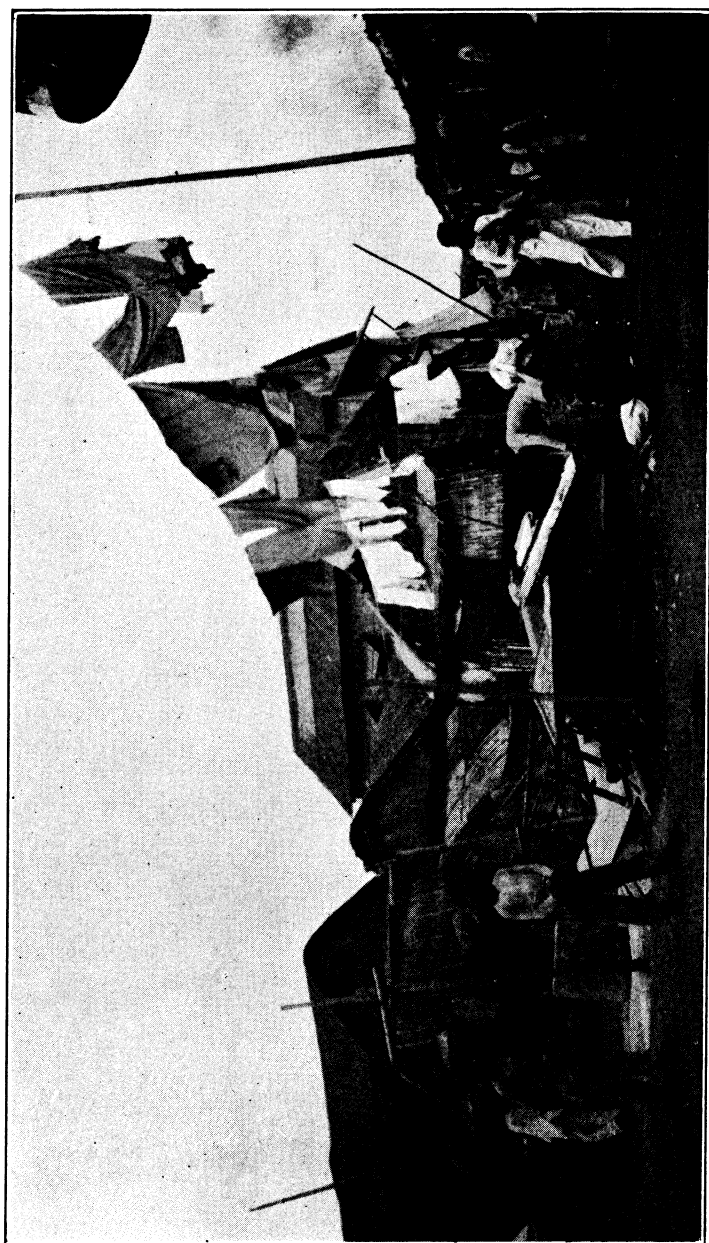


SITE OF NEW CREMATORY, 1902.

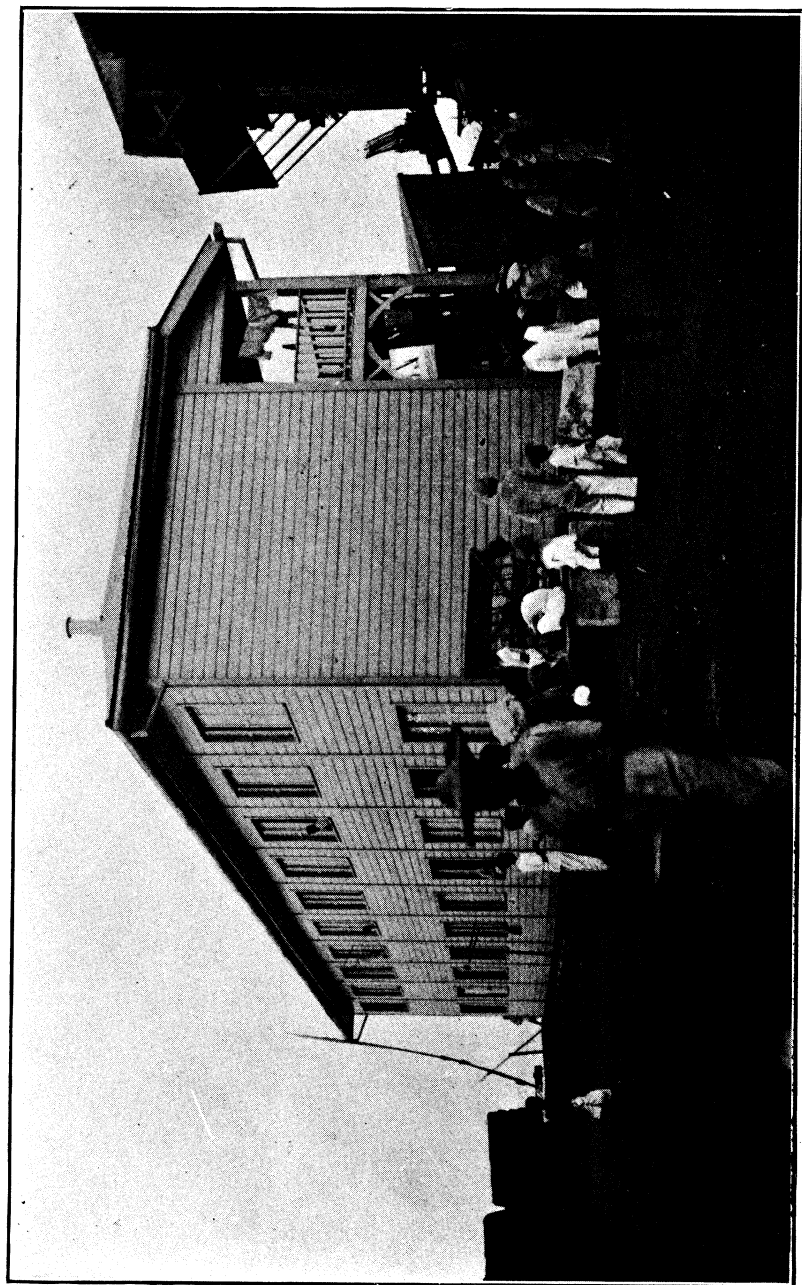


NEW CREMATORY, 1903.

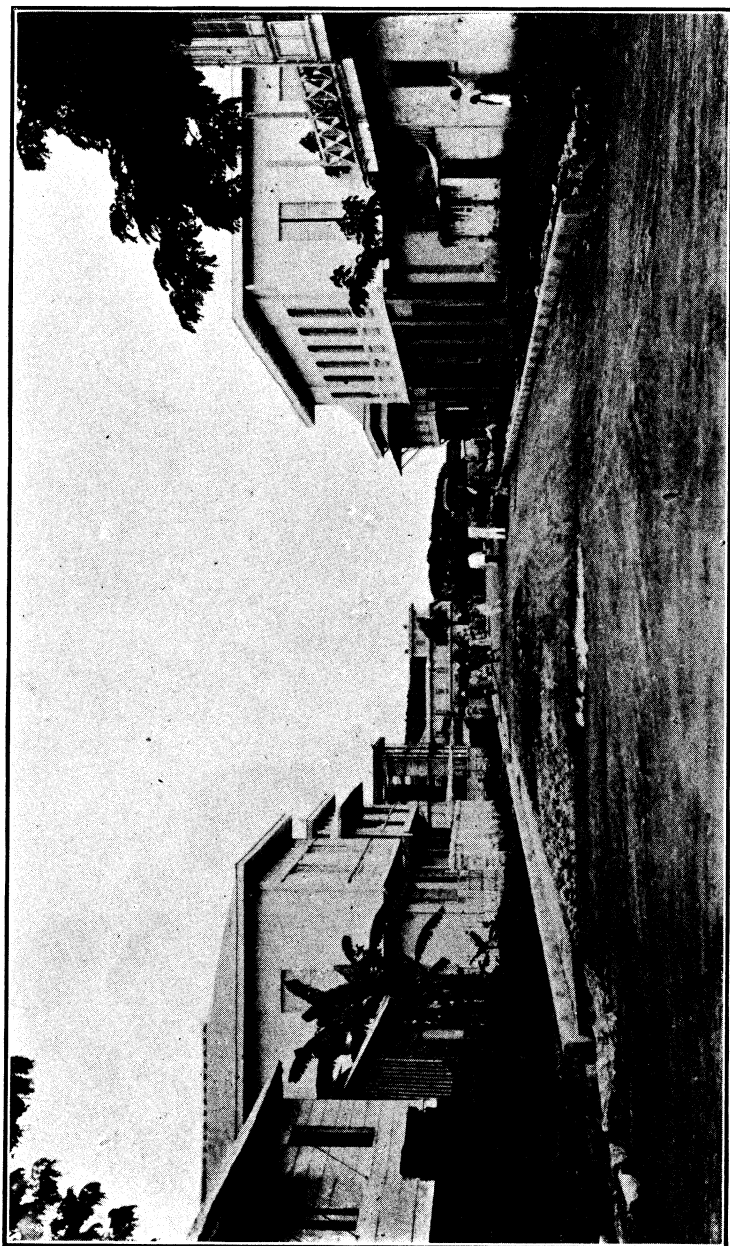




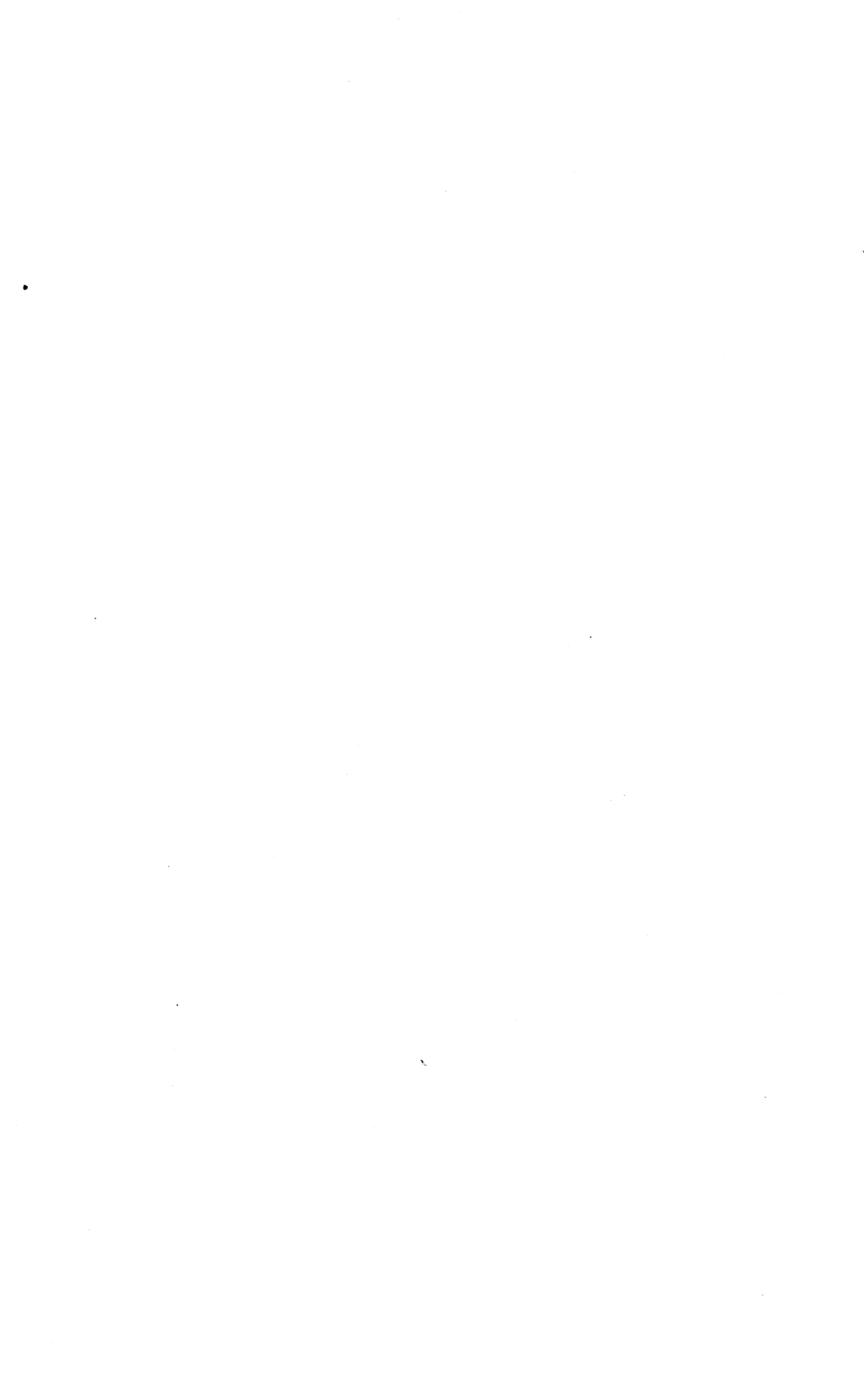
WHERE PLAGUE AND CHOLERA FLOURISHED IN 1902.



A MUNICIPAL TENEMENT, 1903. ERECTED ON THE GROUND SHOWN IN THE OPPOSITE VIEW.



E STREET OF ERMITA EXTENSION.



A number of these changes have undoubtedly been caused by the salary scale of the Department, which is considered too low. Recommendations for increase of pay, based on length of service, will be considered by the Municipal Board during the next half year, and it is expected that the next estimate will include a regular graded scale which it is hoped will encourage the members of the force in their work and will offer such inducements as will make long service attractive. The police fund will be made the nucleus of a benefit fund and will be managed by the Municipal Board.

It is recommended that the salary of Dr. Roxas, assistant surgeon, be increased from \$1,200 to \$1,400. This officer has rendered most efficient service, and in addition to his regular police duties has made the examinations for a large number of civil-service candidates; and it is considered that the salary at present enjoyed is not a just remuneration for the character of the service given.

Among the officers the changes have been quite as numerous, proportionately, as among the subordinate grades, as the following list shows:

Promotions: January 9, 1903, J. E. Harding, from assistant chief to chief; E. S. Luthi, from assistant inspector to assistant chief; John F. Green, from captain to assistant inspector. October 23, 1902, George Seaver, lieutenant to captain. February 4, 1903, Walter E. Wilson, lieutenant to captain. October 23, 1902, Esrom J. Morse, sergeant to lieutenant. January 7, 1903, Mark Scott, sergeant to lieutenant; March 16, Thomas F. Crowley, sergeant to lieutenant. December 1, 1902, Santiago Verzosa, sergeant to lieutenant.

Separations from the service: June 13, 1903, Lieut. Bernabe di Malibot, resigned. July 13, 1903, Capt. Andrew J. Burt, discharged at own request on expiration of leave of absence.

Discharged for cause: June 25, 1903, Dr. H. W. Yeamans, police surgeon. September 6, 1902, Lieut. Hilarion de Guzman; December, 18, Lieut. H. G. Toone.

The many changes in the first-class patrolmen have been a severe tax on the Civil Service Board, which has frequently been unable to supply the best class of men for filling the vacancies, and this has given rise to a large number of probational appointments. In general, the class of men received to-day is not of as high a standard as during the past two years. The field of available men has narrowed very appreciably. The reduction of the Army has, to a large extent, cut off a source of good material. It was found necessary to change the physical requirements for policemen by reducing the height from 5 feet 9 inches to 5 feet 8 inches and the weight to 145 pounds. The examination for the third-class police is of the most simple nature, and there is no lack of material, but, as a rule, a large number of men must be tried out

before one can be found who promises to develop into a capable policeman. Those who have been on the force for a year or more and have been subjected to strict schooling and discipline have shown excellent improvement and are performing their work in a very satisfactory way.

The Filipino members of the police force have continued their study of English, and practically all the old men are able to answer simple questions intelligibly. The schools which were closed during the cholera epidemic of last year have been opened wherever possible, and the attendance has been good.

Fortunately, the cholera has been insignificant in comparison with the epidemic of last year, and the police have been relieved of a great amount of laborious and dangerous work. From time to time special police have been employed at the request of the Board of Health, and these men have performed the work which during the most dangerous period of last year was intrusted to the members of the regular police. The number of complaints concerning the enforcement of the quarantine has been much less in proportion to the number of cases, largely because of the experience during the last epidemic.

The same active coöperation which marked the relations of the Department with the military and Constabulary during the last year has been continued with the best results, though the extent of the work has diminished by reason of changing conditions. The police have not found it necessary to send out large detachments to coöperate with the Constabulary working in the vicinity of the city limits, as was formerly the case. The mounted detachment has continued its active patrol of the city limits and has worked in harmony with the Constabulary officers operating along the border line of the Province of Rizal. The ladrone bands which infested this zone have been harassed and driven before both organizations until at the present time there is practically no organized outlawry in this section of the country. From time to time small raids have been made on the outlying barrios, but the offenders have in a majority of cases been captured and brought before the courts for trial.

In February the two municipal courts were consolidated, doing away with the court room in Santa Cruz and relieving Judge McGirr from his duties. The municipal court is now established in the Parian police station in the Walled City and is presided over by Judge J. M. Liddell. The consolidation has been found to greatly simplify the duties of the police and has caused no apparent interference with the progress of the business of the court.

During the year covered by the last report the Department was dependent upon the public telephone system, which is entirely inadequate and unreliable and in exceedingly bad condition. Since that time the Gamewell police and fire alarm system has been installed and is now giving satisfaction in four precincts. The effect upon the force of the

systematic reports and careful checking is very noticeable, and the officers are kept in constant touch with the men. Only eighty boxes have been installed, but it is proposed to increase this by eighty, covering the greater and more important part of the city.

Three thousand six hundred and four persons were arrested for gambling and 178 for conducting a gambling house, and convictions were obtained in a great majority of the cases. A strong effort has been made to suppress the gambling in all quarters of the city. During the month of August, 1902, gambling houses were opened with great boldness and a campaign of several months was waged before they were well cleared out. For a time a well-organized ring or gang, under the leadership of S. R. Price, defied the police and successfully operated gambling joints where Americans lost large sums of money. The players were limited chiefly to clerks and Army employees, though certain officers of the Civil Government occupying responsible positions and Army officers frequented the games. This gang has been practically run out of town, many of its members being imprisoned and others having hastily departed for the China coast in order to avoid prosecution.

The police station in Paco, which was constructed by contract at a cost of \$4,900, of American timber, has not proven a success. The materials were unsatisfactory, and the building has offered very little protection against the storms. Extensive repairs have been necessary and the experience thus gained, it is hoped, will prevent the department making further mistakes of this character. Plans have been ordered for a new station in the district of San Lazaro, providing for a building of much better construction, and the contract will be awarded during the next half year. The other stations of the city have been generally overhauled and improved, but conditions are not yet satisfactory, though very much improved over those of last year.

A new uniform has been adopted, which is described at length in the report of the chief.

The Secret Service Bureau has developed with surprising success, especially the criminal branch of the work. The public is fast recognizing the opportunities offered by the Bureau and the excellence of its work, and is relying upon the Bureau and aiding it far more than at any time since its organization. The chief, reciting the increase of the work, is careful to state that crime is not on the increase but that the Bureau has gained a reputation as a means of recovering stolen and lost property and running down criminals of all classes. Between July 1, 1902, and June 30, 1903, money and stolen property to the value of \$55,494.31 were recovered. The detectives are being carefully instructed in the laws relating to their work and in the languages of the people among whom they operate. The new ordinance regulating pawnshops, while entailing a great deal of work upon the Bureau, has placed it in close touch with that element from which are recovered so many

missing articles, and the long list included in the report of the chief shows the success achieved in this branch of the work.

One man is detailed to board every incoming and outgoing steamer and to carefully observe all arrivals and departures. Owing to the increased number of defalcations both in the Government service and in business circles this work has been exceedingly valuable during the last few months, and many who would otherwise have escaped were turned back and delivered to the authorities.

The Bertillon system, which was ordered through the Insular Purchasing Agent several months ago, has not yet been delivered, and the old cumbersome identification of criminals and suspicious characters has been continued. It is expected that the Bertillon system will greatly facilitate identification, especially among the native and Chinese population.

Among the most important cases handled during the year was that of Dr. Dominador Gomez de Jesus, president of La Union Obrera Democrática. Much valuable evidence was secured in the house and office of this president, and important assistance was given to the Attorney-General, the Solicitor-General, the Insular Treasurer, and the Prosecuting Attorney of Manila. The prosecution of this case has developed the most serious charges and has laid bare a clever semipolitical scheme for fostering opposition to the Government and at the same time bringing financial benefit to the promoters.

Mainly through the efforts of the discontented element, a large number of seditious and sensational dramas have been presented in Manila. The majority of these, if not all, were in the Tagalog language and portrayed scenes between Americans, Filipinos, and Spaniards. In many cases the plot was so designed that the audience was considerably affected, and it is believed that the malcontents used these plays for the purpose of exciting the people and keeping them discontented and in touch with those who oppose the policy of the Government, and, in fact, the United States Government in any form. The Constabulary has worked with the Bureau in breaking up these plays and the discovery was largely due to the careful observation of members of the Bureau who have mastered the Tagalog language.

Attention is invited to the recommendation of the chief concerning the advantages of conferring rank in the department upon the chief and the members of the Bureau. It is recommended that this be approved, viz, that the chief of the Bureau be given the rank of inspector, the senior American detective the rank of captain, second senior American detective the rank of lieutenant, and all other American detectives the rank of sergeant.

In general it may be stated that the conditions in Manila compare favorably with those of any American city of its size, and the record of the Department shows a surprisingly small number of crimes. In

no city are the laws governing the sale of liquor and the suppression of gambling more rigidly enforced. This is the more remarkable when the mixed character of the population is considered. Manila is singularly free from sailor dives and tough boarding houses and bawdy houses of all classes. There are no streets within its limits which may be considered dangerous to the public at any hour of the day or night, and street robberies and hold-ups are so rare as to be hardly worthy of mention.

The annual report of the Chief of Police gives details of the work of the department for the year.

LAW DEPARTMENT.

The work of all branches of the Law Department has increased both in scope and efficiency. The office of City Attorney has been largely occupied in the preparation of ordinances, acts to be submitted to the Philippine Commission, bonds, contracts, deeds, leases, etc., and a large number of legal opinions rendered to the Municipal Board and various city departments. The office was represented in 36 suits, and 8 land titles were cleared and registered. The organization of the new Court of Land Registration has considerably increased the work of the City Attorney, as the court cites the city in all cases involving the ownership or boundary of a street or public plaza, as well as in cases in which the city claims an interest in the land sought to be registered, or is the owner of adjacent property. Many investigations arising from this source cover periods of one and even two centuries. Only in the rarest cases do documents show that the lands owned and occupied by the city were conveyed by deed and, as a rule, the old grants are to be found only after searching through ancient records and plans hopelessly lost in a mass of unindexed municipal and insular records.

The consolidation of the two municipal courts has brought about a considerable improvement, as it centralizes the work and reduces the expense, yet permits full justice in the transaction of all business.

PROSECUTING ATTORNEY.

One thousand and sixty-four cases were instituted by the office of the Prosecuting Attorney, 472 of these being disposed of in the Court of First Instance and 592 being disposed of in the Municipal Court. Thirty-four deaths were investigated by this office in its performance of the duties of coroner. The business of the office has increased more than 100 per cent during the last year, and in addition to this there have been a great number of investigations of cases submitted, in which no complaints were filed owing to insufficient evidence. The Secret Service Bureau has been very largely used by the Prosecuting Attorney for the purpose of investigating cases and supplying evidence on which to institute proceedings.

SHERIFF'S OFFICE.

The addition of Part III to Parts I and II of the Court of First Instance and the creation of the Court of Customs Appeals and the Court of Land Registration have imposed a heavy increase on the work of the office of the sheriff. On November 1, 1902, the sheriff took over the transportation of prisoners to and from the several courts, which work, up to this time, had been in the charge of the Police Department. The amount of fees, derived almost exclusively from civil cases, was as follows: Mexican currency, \$9,015.41; United States currency, \$226.89.

MUNICIPAL COURT.

The experiment of consolidating the two courts of the city has proven successful, as will be seen from the detailed report of this department, which appears under the head of "Report of the Law Department," reciting at length number of complaints filed and the persons tried, with the disposition of each case.

FIRE DEPARTMENT.

During the past year the Fire Department has developed perhaps more than any other department of the city government. From a partially organized, insufficiently equipped, poorly housed department, with untrained horses and men, has been developed a first-class department, well organized, fairly equipped, fairly housed in temporary buildings, with the exception of the Santa Cruz and San Nicolas stations, which are permanent, with men and horses trained to as near efficiency as possible with the material at hand. However, the department is not yet of sufficient size and efficiency to give fire protection necessary for this city. The department has made every effort for improvement during the year, under the direction of its able chief, and its work has proved its value in extinguishing several fires, the extension of which would have jeopardized the business section of the city.

The department has been hampered by small water mains in fighting the three largest fires that occurred during the year, which had gained such headway before notification had been given to the department, due to unfamiliarity by the public with the alarm system, that the resulting losses were very heavy. Personal observation at two of these fires demonstrated that had there been water mains of a larger diameter in service at these points, these fires would have been controlled and confined to the property which had been destroyed prior to the time of the arrival of the department. To remedy this deficiency of water mains there has been ordered \$50,000 worth of pipe of large dimensions, which will be immediately installed upon its arrival, under plans which have been prepared by the engineers for the distribution system of the new water works.

To further acquaint the public with the alarm system the Fire Depart-

ment is about to issue circulars which will be posted throughout the city in English, Tagalog, Spanish, and Chinese, which it is hoped will accomplish that purpose, and delays in sending in alarms will be obviated.

The records of the department show that during the year 95 alarms of fire, resulting in losses and damage estimated at \$835,325, United States currency, while for the year previous are recorded only 47 alarms and losses aggregating \$42,058, United States currency. Of the 95 alarms received 10 were false, and the causes for the remaining 85 fires are reported as follows:

Unknown	22
Carelessness	12
Defective flues or open fireplaces.....	12
Lamp explosions	13
Overturned lamps	7
Chemical combustion	2
Electric-light wires	2
Lamp or candle too near woodwork.....	2
Sparks from chimney.....	2
Lighted torch	1
Ignition of box of matches.....	1
Heat from smokestack.....	1
Supposed incendiary	3
Spontaneous combustion	1
By order of Board of Health.....	4
<hr/> Total	<hr/> 85

These alarms were received in the following manner: .

Telephone	38
Verbal	29
Alarm system	28

Since inaugurating the alarm system 60 per cent of all alarms have been received through this source.

The large losses during the year are due to the burning of the Pacific Oriental Trading Company warehouses in July, 1902, loss \$280,000; the Trozo nipa fire in May, 1903 (see photograph), loss \$125,000; and the burning of the Compañía General de Tabaco warehouse in June, 1903, loss \$375,000, or a total loss in three fires of \$780,000 or more than 93 per cent of the entire losses for the year.

The Chief of the Fire Department reports three fires during the year of supposedly incendiary origin, yet this is doubtful, and no proof has been developed by the Police Department after a searching investigation that these were fires of incendiary origin. Wherever Oriental peoples, especially Chinese, are a factor in the population, insurance companies invariably charge an increased insurance rate against fire on account of moral risk, and both the Fire and Police Departments of the city have investigated causes of fire with the idea of obtaining possible data

relative to the moral risk in the Philippines, and yet during the past year no single case has been developed as a cause for the fires to which the Department has been called.

The strength of the Fire Department has been increased by 20 men during the year—from 80 to 100—consists of 53 Americans and 47 Filipinos.

There are now in the service 1 chief, 1 assistant chief, 1 electrician, 3 engine companies with the accompanying hose wagons, 4 chemical companies, and 2 hook-and-ladder companies, occupying five stations, using 34 American horses and 11 native ponies and 11,000 feet of $2\frac{1}{2}$ -inch fire hose. The department is also supplied with hand extinguishers, life-saving apparatus, and other modern appliances for use at fires. The past year has seen the completion of the San Nicolas fire station, a modern station which is most satisfactory and in a section of the city where it was badly needed, at a cost of \$35,849.13, Mexican currency. All the other stations have received repairs, except the Tanduary station, where it is expected a new station will be erected very soon. All the stations are now in good condition, and reflect credit to the city and the department.

The accepted plans for the permanent organization of the department call for 6 engine companies, 4 chemical companies, 2 hook-and-ladder companies, and 1 fire-boat company, with a total personnel of 153 men and 50 horses which are to be housed in eight stations throughout the city. With this plan in view, all the apparatus, except the fire boat has been contracted for, and plans are being prepared for a fire boat for use on the river and bay. To properly house this department it will be necessary to erect at least four new stations within the next two years, including the Tanduary station, which has already been provided for. It is believed that the organization thus proposed will be completed during the present fiscal year, with the exception of the fire-boat company, and with the permanent quarters now in use the city will be well protected from fire.

During the year the Board has adopted rules and regulations for the Fire Department, which have been printed and distributed to all members thereof. New uniforms, devices, badges, and insignia were also authorized and are in use by the department.

The question of proper horses for the department is a serious one, as four horses were lost through disease during the past year and there is no available supply of horses at hand: It is hoped that arrangements may be made through the Insular Purchasing Agent to purchase direct from the United States or Australia all horses for the department which may be suitable for the work, instead of purchasing almost any animal that can be purchased in the local market.

Increased activity in the electrical department is apparent, and increase in personnel has been necessary. The Gamewell system, consisting of 80

fire-alarm boxes, 80 police-alarm boxes, and the necessary central office apparatus, switchboards, etc., has been installed and is in operation and giving good results. The department is preparing plans for the extension of this system to double its size in the near future, and 80 additional police boxes have already been ordered. This department has also undertaken the installation of interior electric lights for the city at a cost considerably below that which contractors would bid for the work. The city electrician has been gradually compelling the remodeling of all installations not up to the standard, and is also at work upon plans for the exterior remodeling of the systems of the electric-light company and the telephone company. The records show 1,457 permits for electrical installations and 1,244 certificates issued. The condition of the Manila Telephone Company's lines is such as to call for extensive alterations, and these lines are in some instances a menace to safety and very unsightly, and the electrician expects to obtain immediate results on outside construction by this company.

The total expenditures of the department for the year were \$173,831.50, United States currency, and may be segregated as follows:

Nonrecurring expenses:

New apparatus and equipment, including Gamewell fire-alarm system	\$88,942.01
Installation of Gamewell fire and police alarm system.....	9,999.71
Total nonrecurring expenses.....	98,941.72

Current expenses:

Forage, general supplies, and contingent expenses.....	13,535.51
Salaries and wages.....	61,354.27
Total current expenses.....	74,889.78
Grand total	173,831.50

The annual report of the chief of the Fire Department gives details of the work of the department for the year.

DEPARTMENT OF ASSESSMENTS AND COLLECTIONS.

The Department of Assessments and Collections has been greatly inconvenienced during the past year by changes in the personnel, due to various causes, yet the work accomplished has exceeded that of any previous year. The department was in charge of the Chief Deputy Collector, Mr. Ellis Cromwell, from the beginning of the fiscal year to January 10, 1903, when Mr. A. W. Hastings was appointed City Assessor and Collector, but since his appointment he has been almost continually engaged as a member of the Board of Tax Revision, and has not been able to devote his undivided attention to the office of City Assessor and Collector. Several subheads of divisions have also been promoted out of this department during the year, and such changes have caused

serious delays to the department in its work, and the best results have not been obtained.

The collections during the year, \$1,383,407.11, United States currency, show an increase of 29 per cent over those of the year previous, notwithstanding that the collection of the land tax for the first half of the year 1903 of over \$420,000, United States currency, was postponed by the Tax Revision Act.

The increases in collections may be segregated as follows:

Increases of collections of 1903 over 1902.

Land tax	\$278,315.16
Industrial tax	31,304.69
Certificates of registration.....	1,088.45
Matadero fees	13,167.28
Market fees	6,916.68
Licenses	11,615.92
Vehicle tax	2,361.32
Justices of peace fines and fees.....	232.45
Sheriff's fees	1,351.25
City attorney's fees	84.71
Rents	1,852.97
Certificates of electrical installation.....	722.31
Pound receipts	770.76
Registration of cocheros.....	1,119.15
Public-health fees	4,065.33
Total increase	354,968.43

Decreases of collections of 1903 from 1902.

Stamp sales	1,927.64
Municipal Court fines.....	15,530.20
Live-stock registration	18.44
Vehicle equipment	116.88
Miscellaneous collections	2,522.43
Frontage tax (abolished).....	21,592.37
Sale of land.....	489.95
Total decrease	42,197.91

Net increase of collections of 1903 over 1902..... 312,770.52

The greatest increase in collections is in the land tax, due to increased rate, the addition of new territory, and the collection of many delinquent taxes of the two previous years. Many other items also show material increases. The actual increase in industrial tax, certificates of registration, matadero and market fees, vehicle tax, and rents is more than is apparent on account of the fact that these items are payable in Mexican currency, the value of which has been materially reduced during the year, thus causing a loss to the city's revenue when expressed in United States currency.

The apparent decrease in the stamp sales is mainly due to the decline

in the rate of Mexican currency and discontinuance of the use of these stamps by the customs authorities, and although this statement shows a decrease in the amount collected the actual number of stamps sold is in excess of the year previous.

The decrease in the municipal court fines is due to the decrease in the number of gambler's fines, due to the stringent antigambling ordinance, and all other items showing decreases are due to the fact that such collections, as revenue, have been abolished; thus, it can be fairly stated that every item of legitimate revenue to the city shows an increase for the year.

The cost of collection (entire expense of the department) for the year was \$82,244.19, or 5.9 per cent of the collections. This is a reduction of \$13,456.57 from the expenses of the previous year, notwithstanding the increased collections. The cost of collection for the year previous was 8.9 per cent of collections.

The public markets of the city have been considerably improved during the year, and a new market, called "Anda Market," was opened to the public in the Walled City and a contract entered into for more than doubling the size of the present Arranque Market. The markets of the city are well patronized and are giving general satisfaction both to the public and the vendors therein, and owing to the large patronage of the three principal markets, Divisoria, Arranque, and Quinta, some complaints have been received of the unsanitary condition and overcrowding of these markets. These matters have received the attention of both the Board of Health and the Municipal Board, and the number of volantes have been materially reduced in order to overcome this objection. It is believed that when the addition to the Arranque Market is completed the city can furnish to all comers the space they desire in the public markets for the sale of food products. The outlying districts—Sampaloc, Paco, Santa Ana, and Gagalangin—are in need of better market facilities, and plans are being prepared for the erection of small market houses in these suburbs. The removal of Herran Market to a more conveniently situated site is desirable from a point of convenience to the public and a financial standpoint, and it is the intention to convert the present market into a city stable and erect a new market of about half its size in the vicinity of Calle Ligeras, Malate. The net revenue derived from market fees for the year was \$88,906.66, United States currency.

The collections at the public slaughterhouse during the year indicate an increased business of 23 per cent over the year previous. This is caused both by the increased number of animals slaughtered and the enforcement of a new ordinance regulating the conduct of the slaughterhouse. Increased facilities for handling meat, such as an overhead trolley system, automatic scales, etc., have been contracted for and should be installed very shortly.

The following comparison indicates the increased consumption of meat by the native population of Manila over the previous year :

Animals slaughtered in matadero.	1902.	1903.	Increase.
Hogs.....	54,644	63,599	8,955
Cattle.....	16,516	23,385	6,869
Sheep.....	None.	204	204
Total.....	71,160	87,188	16,028

Few complaints have been received during the year regarding the conduct of the matadero, and it can be considered as perhaps one of the most successful of the city's institutions, as well as producing during the past year a net revenue of about \$65,000.

The operation of the land tax during the year besides producing the largest amount of revenue of any item to the city has had the effect of compelling holders of vacant property to either make improvements thereon or dispose of their holdings. That this effect is beneficial to the interests of the city can scarcely be doubted, and already suburban additions to the city are being made, landholders offering property for street purposes and terraplaning marshes and swampy ground, and erecting residences in sections which heretofore have been undeveloped. Attention is invited in this respect to the report of the engineer regarding building operations in the city, all of which will tend in the near future to reduce the excessive rentals for residences which have obtained almost since American occupation. This property-improvement has also caused the removal of large numbers of nipa buildings from the district of strong material, thus decreasing the fire risk and removing from good residence localities what have heretofore been considered as eyesores—old nipa shacks. It is anticipated that during the present fiscal year the districts of Ermita and Malate will be materially improved in appearance. Other outlying districts are fast building up, such as Santa Mesa, Trozo, and Paco. All these improvements are forced more or less by the operation of the Land Tax Law.

LICENSES.

Notwithstanding that during the past year general business conditions have been considered unfavorable, yet the number of licenses issued shows an increase over the year previous, and these licenses are an item of considerable revenue to the city of Manila, amounting to \$164,820.45 for the year. The number of liquor licenses, exclusive of native wine licenses, has been somewhat reduced, and at the close of the year there were extant in the city 124 bar licenses and 53 restaurant and hotel liquor licenses, or a total of 177 drinking places where liquor could be obtained and drunk upon the premises, exclusive of native wine shops.

The Board has ceased to authorize bar licenses in the residence districts of Ermita and Malate, and the Philippine Commission has

prohibited the selling of liquor in the southernmost portion of the district of Malate and the eastern portion of the district of Sampaloc. The number of native wine licenses during the year has been increased to 1,168, as it has been found by experience that these places are orderly, well kept, and when under the supervision of the police and sanitary officers seldom create disorders or become objectionable.

The licensing of pawnbrokers has been regulated by ordinance, by which the Police Department is charged with the supervision over this class of business, and the results so far obtained have been very satisfactory.

The number of vehicle licenses, dog licenses, and bicycle licenses has been materially increased during the year.

The amount of revenue received from the rents of landed city property, \$4,509.18, shows an increase of over 40 per cent over the year previous, the city having entered into several leases during the year by throwing open to the public bid the leases on property the title to which is not in doubt. There are many other pieces of city property which will undoubtedly be leased in the future, but the uncertainty of titles and the necessity for property for public buildings has delayed the Board in offering this property to the public for revenue purposes.

Attention is invited to the annual report of the Assessor for further details of the work of the department.

DEPARTMENT OF CITY SCHOOLS.

The School Department, like many other departments of the city, has had a change in the position of chief of department, Mr. Mason S. Stone retiring on June 6, 1903, and the position of superintendent being vacant until June 15, when Mr. G. A. O'Reilly was appointed superintendent.

During the year the schools made very little progress, and have been unsatisfactory in many ways. Primarily, the attendance of about 3,000 in the day schools and 1,500 in the night schools is far below what the attendance of public schools in the city should be. There are many causes which have tended to reduce the attendance of public schools during the year, of which the lack of proper schoolhouses and the large number of private schools are the principal ones.

The Board has furnished the School Department, upon their application, all the buildings they require for school purposes, but it must be admitted that these buildings in many cases are certainly not adapted for the purpose they are used, and plans are being prepared for the erection of school buildings in the immediate future. It is proposed to erect, as soon as plans can be drawn and contracts entered into, a school building in Tondo with a capacity of 1,000, one in Ermita with a capacity of 400, and one in Trozo or San Miguel with a capacity of 400. During the year a small school building has been erected in the suburb

of Gagalangin, which has been very satisfactory. Owing to the necessity of the removal of the offices of the city government from Calle Palacio, it has been necessary to take the school building on Calle Victoria, Intramuros, for use as a city hall. This was done during the long vacation, and the pupils attending that school were diverted to other parts of the city. The occupancy of this building, however, should not continue after the 1st of March, 1904, when the building will be entirely renovated, the grounds remodeled, and it will then be a satisfactory school building for the Intramuros district.

The personnel of the local school board has somewhat changed during the year and now consists of Messrs. F. E. Green, R. E. Herdman, Catalino Sevilla del Rosario, W. S. Washburn, and the chairman, Mr. G. A. O'Reilly.

It is believed that the coming fiscal year will see a great improvement in the public schools, both in attendance, in buildings, and in the administration of the School Department of the city.

Attention is invited to the detailed report of the superintendent in this report.

REPORT OF FINANCES.

The condition of the finances of the city of Manila, after a year of increased revenue and expenditure, is very satisfactory, showing a credit balance of \$205,152.36, with practically no liabilities.

The following statements show the receipts of the city for the fiscal year, the expenditures for the fiscal year by departments, and a statement of the financial condition June 30, 1903:

Statement of receipts of the city of Manila for the fiscal year 1903.

[Reduced to United States currency at ratio of \$2.30 Mexican for \$1 United States currency.]

Department of Assessments and Collections:

Land tax	\$584,146.42
Industrial tax	230,829.02
Stamp sales	66,582.39
Certificates of registration.....	52,088.79
Matadero fees	70,245.64
Market fees	109,024.47
Licenses	164,820.45
Live-stock registration	506.71
Vehicle tax	20,952.81
Municipal Court fines and fees.....	62,691.87
Justice of peace fees.....	1,899.39
Sheriff's fees	3,566.89
City Attorney's fees.....	109.54
Rents	45,091.18
Miscellaneous	2,316.39
Certificates of installation.....	1,673.81
Pound receipts	941.66
Registration of cocheros.....	1,119.15
Board of Health fees.....	4,065.33
	<hr/> \$1,383,407.11

Statement of receipts of the city of Manila for the fiscal year 1903—Continued.

Department of Engineering and Public Works:

Water service—

Rates	\$124,010.02
Plumbing	3,726.72
Fines	483.95
Fire plugs	404.87
Building permits	7,665.90
Weights and measures.....	3,167.13
Improvement grounds, printing plant.....	1,370.73
Fabrication service belts, Fire Department.....	45.98

Secretary of Municipal Board:

\$140,875.30

Forfeitures 650.00

Police Department:

Refunds account supplies furnished police..... 5,555.27

City Attorney:

Sale of law books by transfer to Attorney-General's office..... 67.10

Total receipts 1,530,554.78
Statement of expenditures, city of Manila.

[Reduced to United States currency at ratio of \$2.30 Mexican for \$1 United States currency.]

Department.	Salaries and wages.	Contingent expenses.	Public works.	Equip-ment.	Tax re-fund.	Aggregate.
Expenditures during fiscal year 1903:						
Municipal Board.....	\$43,932.77	\$30,260.91				\$74,193.68
Law Department.....	60,355.69	6,499.38				66,855.07
Fire Department.....	55,391.04	20,301.24		\$94,553.47		170,245.75
Department of Assessments and Collections.....	72,001.70	4,359.77			\$716.17	77,077.64
Department of City Schools.....	79,042.57	1,185.98				80,228.55
Police Department.....	532,814.29	18,994.75		47,513.54		599,322.58
Department of Engineering and Public Works.....	301,962.18	49,285.01	\$467,738.60			818,985.79
Total	1,145,500.24	130,887.05	467,738.60	142,067.01	716.17	1,886,909.06
Expenditures for year 1902 during year 1903:						
Municipal Board.....	69.97	104.65				174.62
Law Department.....	128.01	218.13				346.14
Fire Department.....	865.97	301.53		7,089.16		8,256.66
Department of Assessments and Collections.....	88.55	1,092.18				1,180.73
Police Department.....	11,199.65	2,499.20		13,026.37		26,725.22
Department of City Schools.....	2,164.27	2,514.09				4,678.36
Department of Engineering and Public Works.....	1,139.72	946.73	31,720.76			33,807.21
Total	15,656.14	76,765.51	31,720.76	20,115.53		75,168.94
Aggregate						1,962,078.00

Statement of financial condition of city of Manila June 30, 1903.

Balance June 30, 1902.....	\$48,052.19
Total receipts from all sources.....	1,530,554.78
Thirty per cent of expenses paid by Insular Government.....	588,623.40
<hr/>	
Total	2,167,230.37
Total expenditures during year.....	1,962,078.01
<hr/>	
Balance to credit of city.....	205,152.36

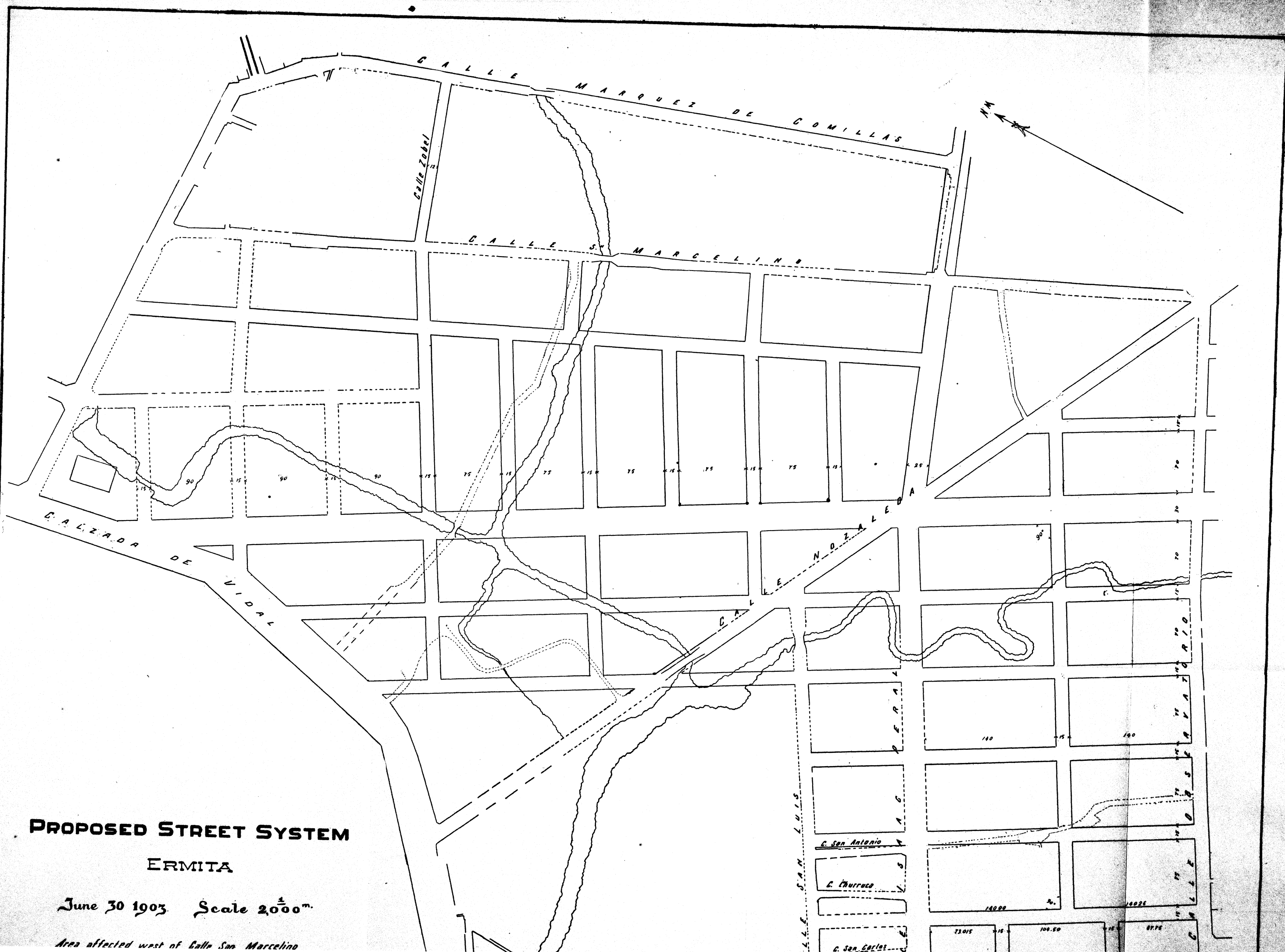
The revenues for the year (\$1,530,554.78) show an increase of \$413,962.99, or more than 37 per cent over last year, due mainly to the increase of the land tax from 1 to 1½ per cent on the assessed valuation, and also to an increase in almost all other items of revenue.

Had the payment of the land tax for 1903 not been postponed by the Tax Revision Law the revenues would still further have been increased to the extent of \$400,000.

The principal sources of revenue of the city were contributed in the following ratios:

	Per cent.
Land tax	38
Industrial tax	14
Licenses	10
Water service	8
Market fees	7
Matadero fees	4½
Stamp sales	4
Municipal Court fines.....	4
Certificates of registration.....	3½
Vehicle tax	1½
Building permits	½
All other items.....	5
<hr/>	
Total	100

The total expenditures for the year (\$1,962,078) have exceeded those of last year by \$435,592.86, or about 22 per cent. Of these expenditures \$75,168.94 is applicable to the fiscal year 1902, leaving the actual expenditures for the fiscal year 1903 \$1,886,909.06, which may be segregated as follows:

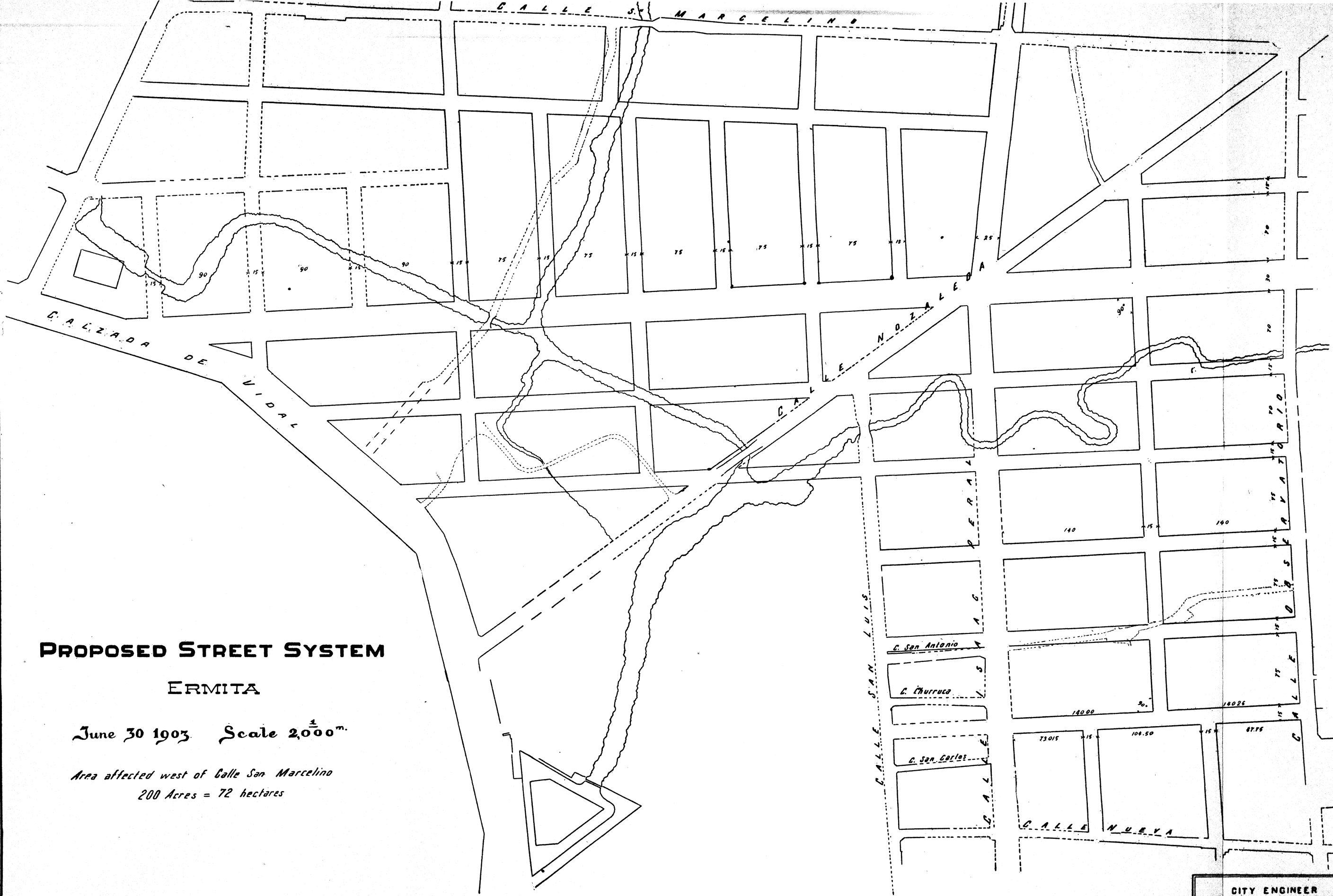


PROPOSED STREET SYSTEM

ERMITA

June 30 1903 Scale 2000^m

Area affected west of Calle San Marcelino



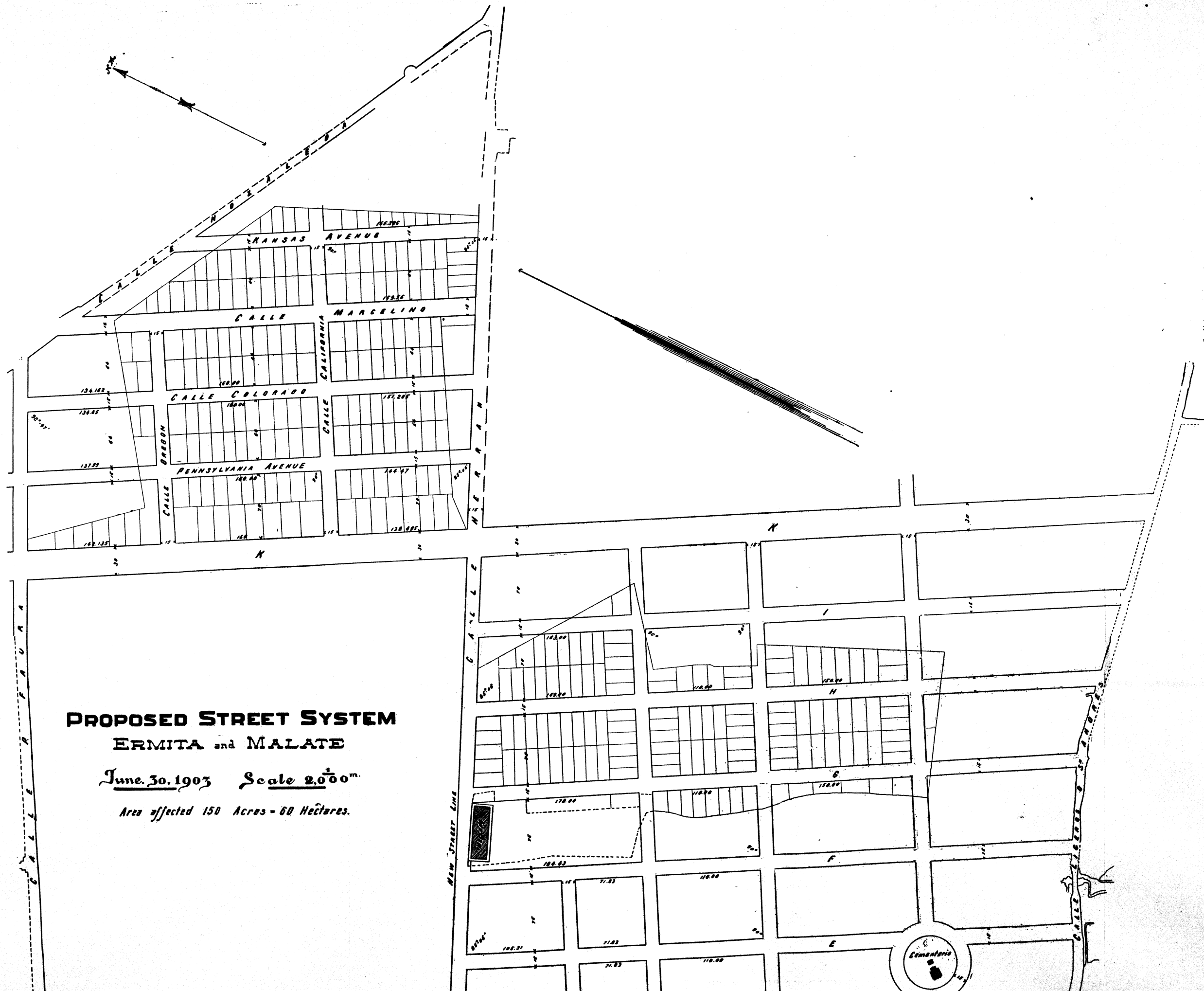
PROPOSED STREET SYSTEM

ERMITA

June 30 1903 Scale 2,000¹/_m.

Area affected west of Calle San Marcelino
200 Acres = 72 hectares

CITY ENGINEER			
Dept. of Engineering and Public Works			
MANILA			
Date June 1903	Book		
Class	Sheet	No. 90	
Office	Tracer		
Surveyor	Engineer		



PROPOSED STREET SYSTEM
ERMITA and MALATE

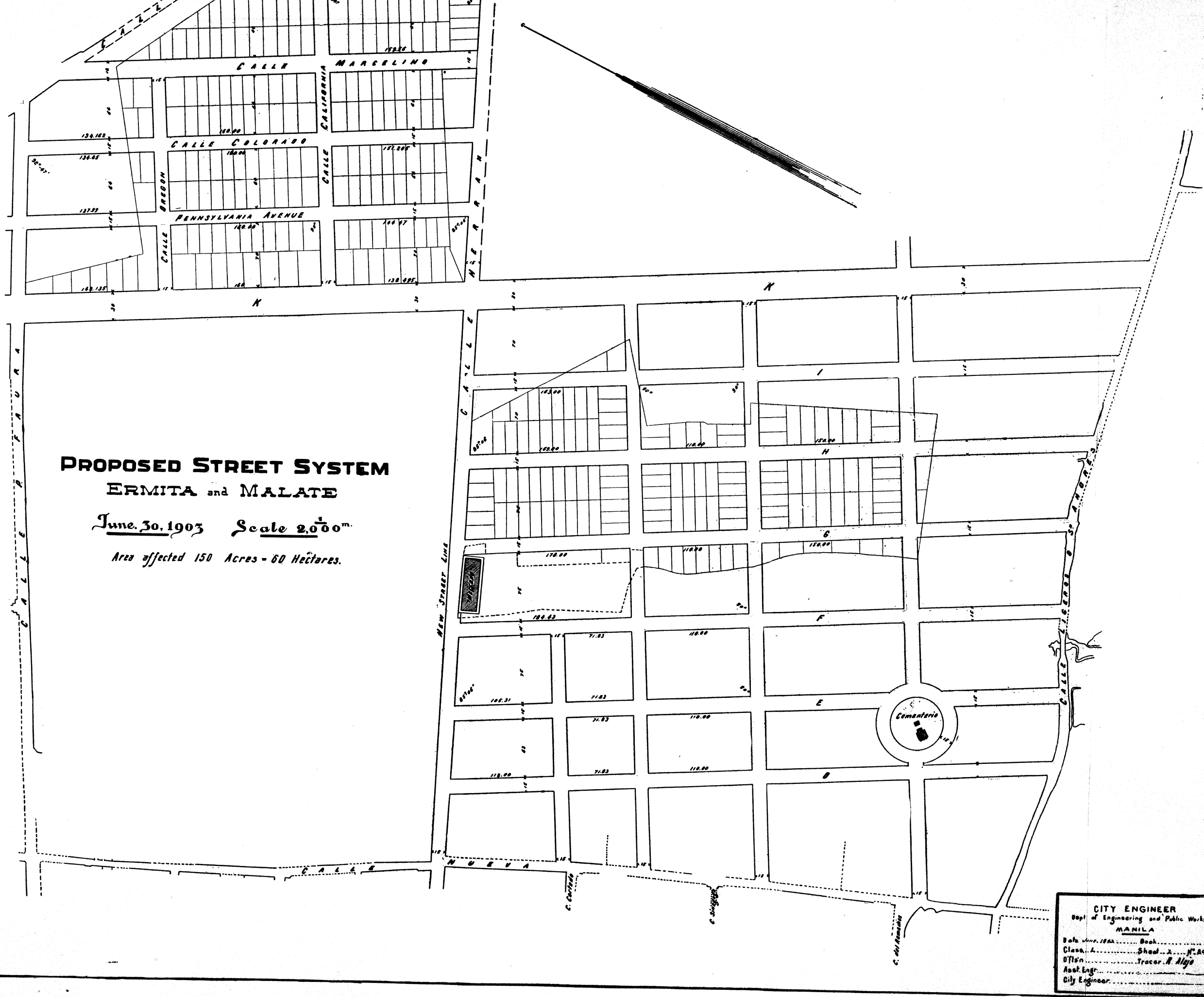
June 30, 1903 *Scale 2,000^m*

Area affected 150 Acres - 60 Hectares.

PROPOSED STREET SYSTEM **ERMITA and MALATE**

June 30, 1903 Scale 2,000^m

Area affected 150 Acres - 60 Hectares.



CITY ENGINEER
 Dept. of Engineering and Public Works
MANILA
 Date June 1903 Book
 Class. A. Sheet 2. N. 20
 Division Tracer. A. Aljo
 Asst. Eng.
 City Engineer.



Current and nonrecurrent expenses, fiscal year 1903.

Department.	Salaries and wages.	Contingent expenses.	Public works.	Equip-ment.	Tax re-fund.	Total.
Current expenses:						
Municipal Board	\$38,184.54	\$28,883.55				\$67,068.09
Law Department	60,355.69	6,499.38				66,855.07
Fire Department	53,104.23	10,730.85				63,835.08
Department of Assess-ments and Collec-tions	60,528.79	4,359.77				64,888.56
Department of City Schools	79,042.57	1,185.98				80,228.55
Police Department	523,121.79	18,994.75				542,116.54
Department of Engi-neering and Public Works	301,962.18	49,285.01	\$219,791.92			571,039.11
Total	1,116,299.79	119,939.29	219,791.92			1,456,031.00
Nonrecurrent or extraor-dinary expenses:						
Municipal Board	5,748.23	1,377.36				7,125.59
Fire Department	2,286.81	9,570.39		\$94,553.47		106,410.67
Department of Assess-ments and Collec-tions	11,472.91				\$716.17	12,189.08
Police Department	9,692.50			47,513.54		57,206.04
Department of Engi-neering and Public Works			247,946.68			247,946.68
Total	29,200.45	10,947.75	247,946.68	142,067.01	716.17	430,878.06
Aggregate						1,886,909.06

This statement indicates that the current expenses of the city were \$1,456,031, of which \$1,116,299.79 or 76 per cent was expended for salaries and wages, \$119,939.29 or 8 per cent for contingent expenses, and \$219,791.92 or 16 per cent for the maintenance, repair, and upkeep-ing of public works.

The relation of salaries and wages, which consumed 76 per cent of the current expenses of the city, may be stated as follows, showing the number of Americans and Filipinos employed to consume this sum of money:

Department.	Relation of salaries and wages paid to total current expenses.	Average number of Filipinos employed.	Average number of Americans employed.
	<i>Per cent.</i>		
Municipal Board ¹	2½	23	17
Law Department	4	45	19
Fire Department	3½	46	51
Department of Assessments and Collections	4	122	26
Department of City Schools ²	7	156	2
Police Department	35	521	425
Department of Engineering and Public Works	20	{ 3,287 2,368	123

¹ Including secretary's office, disbursing office, and Advisory Board.

² Superintendent and American teachers paid from insular funds.

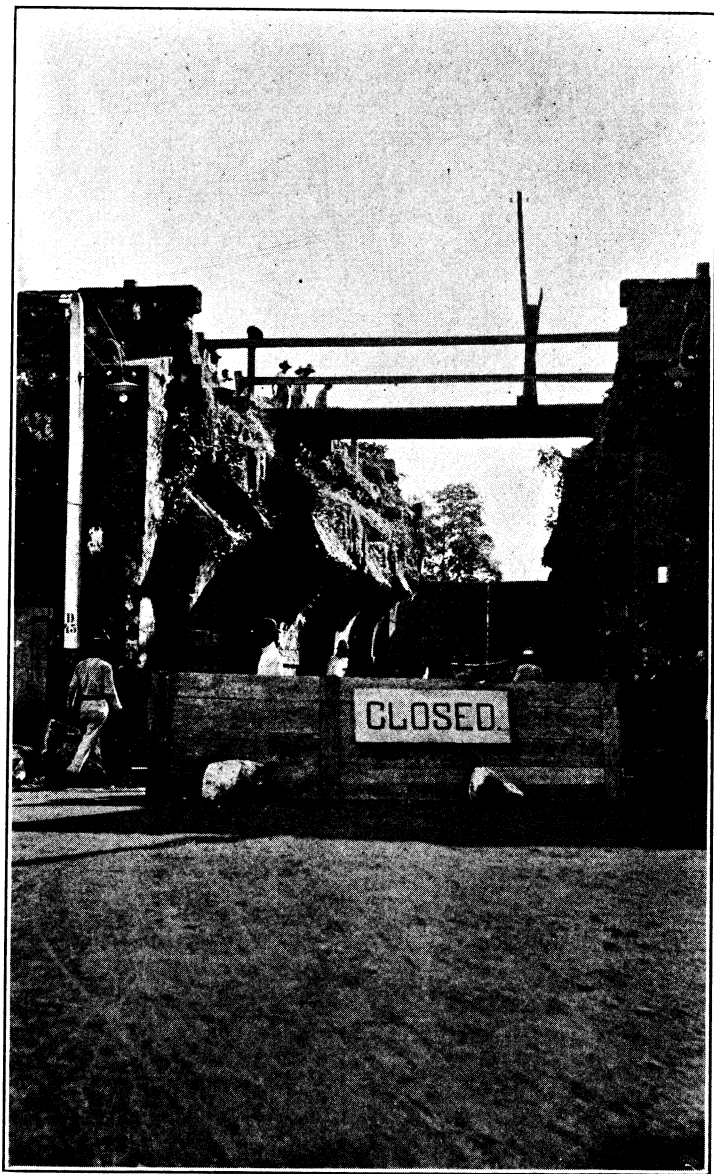
³ Day laborers.

There is included in the expenditures for contingent expenses, public works, and equipment, various amounts, the aggregate of which is \$36,456.18, which has been paid to the Insular Purchasing Agent, as the 10 per cent increased cost of all supplies purchased by the city through him. This 10 per cent materially increases the cost of supplies and materials, and the amount paid during the past year is excessive. The city should not be called upon to contribute in this manner for maintaining the office of the Insular Purchasing Agent, as the service rendered is poor, the prices paid and the materials furnished are not always satisfactory, and the delays occasioned through this method of purchasing material and supplies are often a hindrance to public work. It can be clearly shown that in many cases the Insular Purchasing Agent contracts for supplies or material to be delivered at the warehouses of the city, the city thus paying freight, insurance, and lighterage to point of delivery, and then paying 10 per cent in addition for what little time, expense, and bookkeeping the Insular Purchasing Agent's office has expended. This is not justice to the city, and the rate should either be materially decreased to 2 or 3 per cent or the city be allowed to purchase many supplies which they are now compelled to purchase through the Insular Purchasing Agent in the same manner as provincial governments, under the provisions of section 1 of Act No. 231. It is not the intention of the Board to establish a purchasing agent's office for the city, but merely that the city should be able to purchase, for example, its own paving blocks by direct contract or coal for use of the various departments without resorting to the Insular Purchasing Agent and getting supplies that are not satisfactory and that have cost the city 10 per cent above the cost to business concerns. There is no doubt but that in the purchase of stationery, tools, and other articles coming from the United States the benefits by purchasing through the Insular Purchasing Agent are worth something to the city, but it is not believed that the Insular Purchasing Agent should make a profit on the supplies furnished to the city.

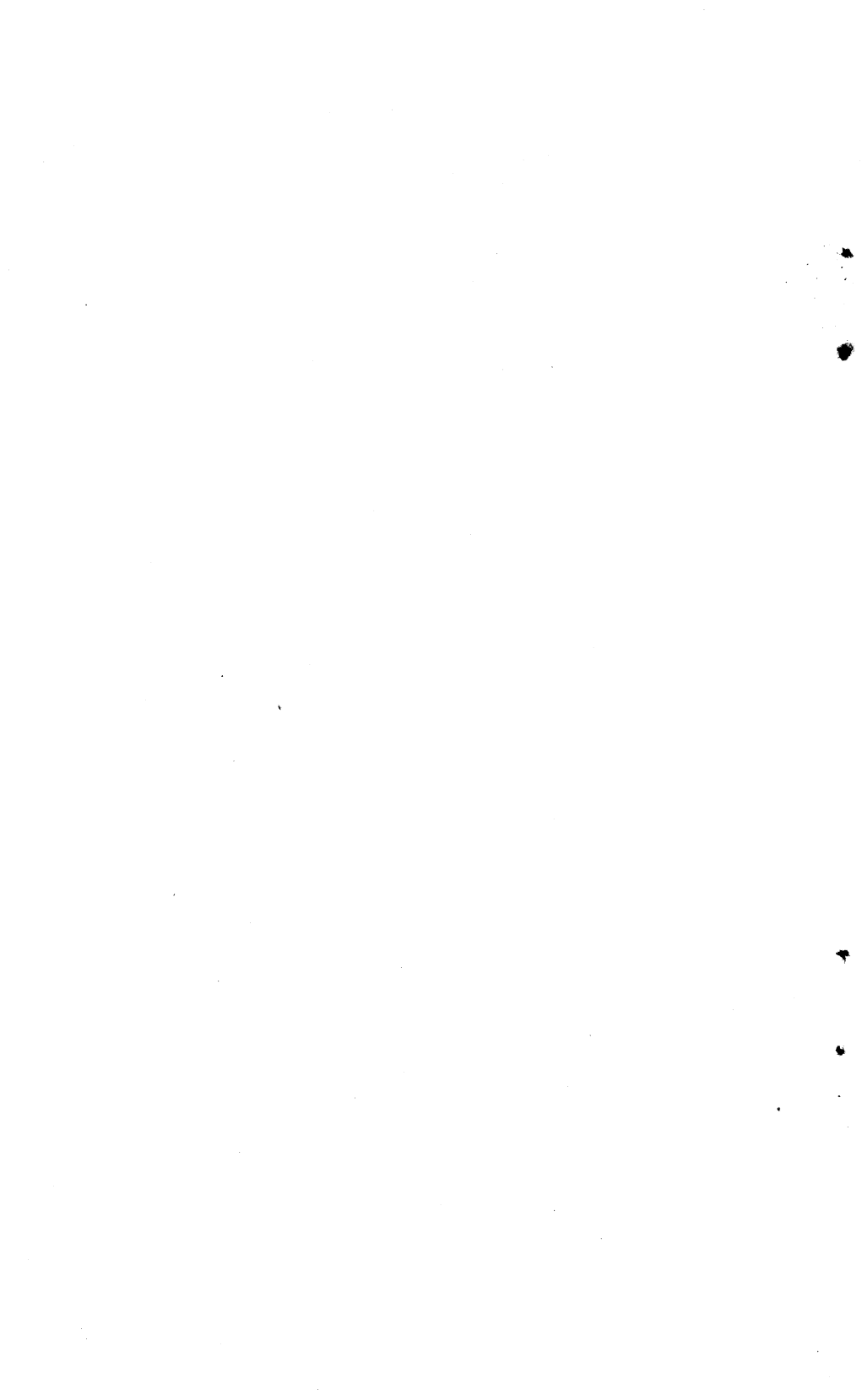
Regarding the items of nonrecurrent expenses of the city for the year, attention is invited to the report of the disbursing officer under the caption "Expenditures for public improvements," which shows that the Engineer's Department expended during the year under this head \$247,-946.68. In addition, the following nonrecurrent expenses were paid:

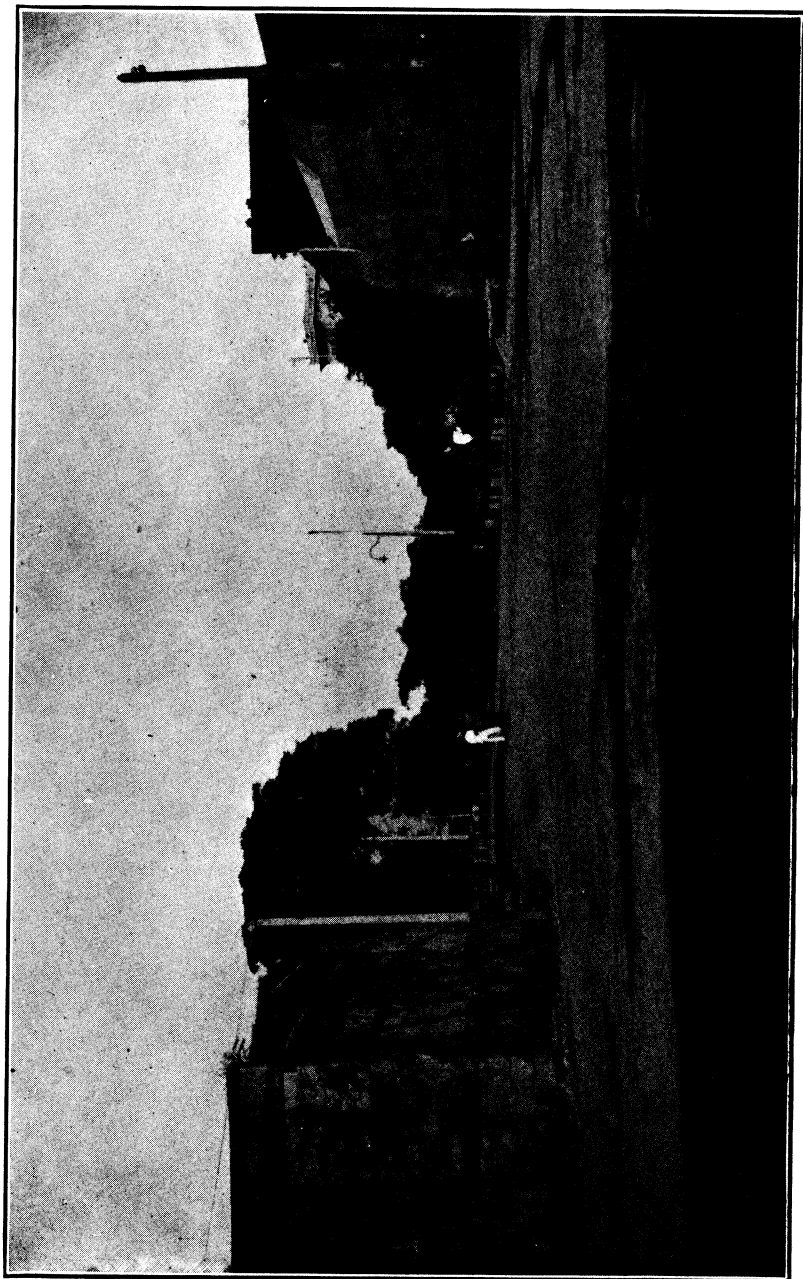
Expense of board of tax revision.....	\$7,125.59
Purchase of new fire apparatus, equipment and installation of Gamewell system.....	106,410.67
Emergency employees, City Assessor and Collector's office, on real-estate tax assessment.....	12,189.08
Cholera police and the Gamewell police-alarm system.....	57,206.04

Making a total of \$430,878.06.

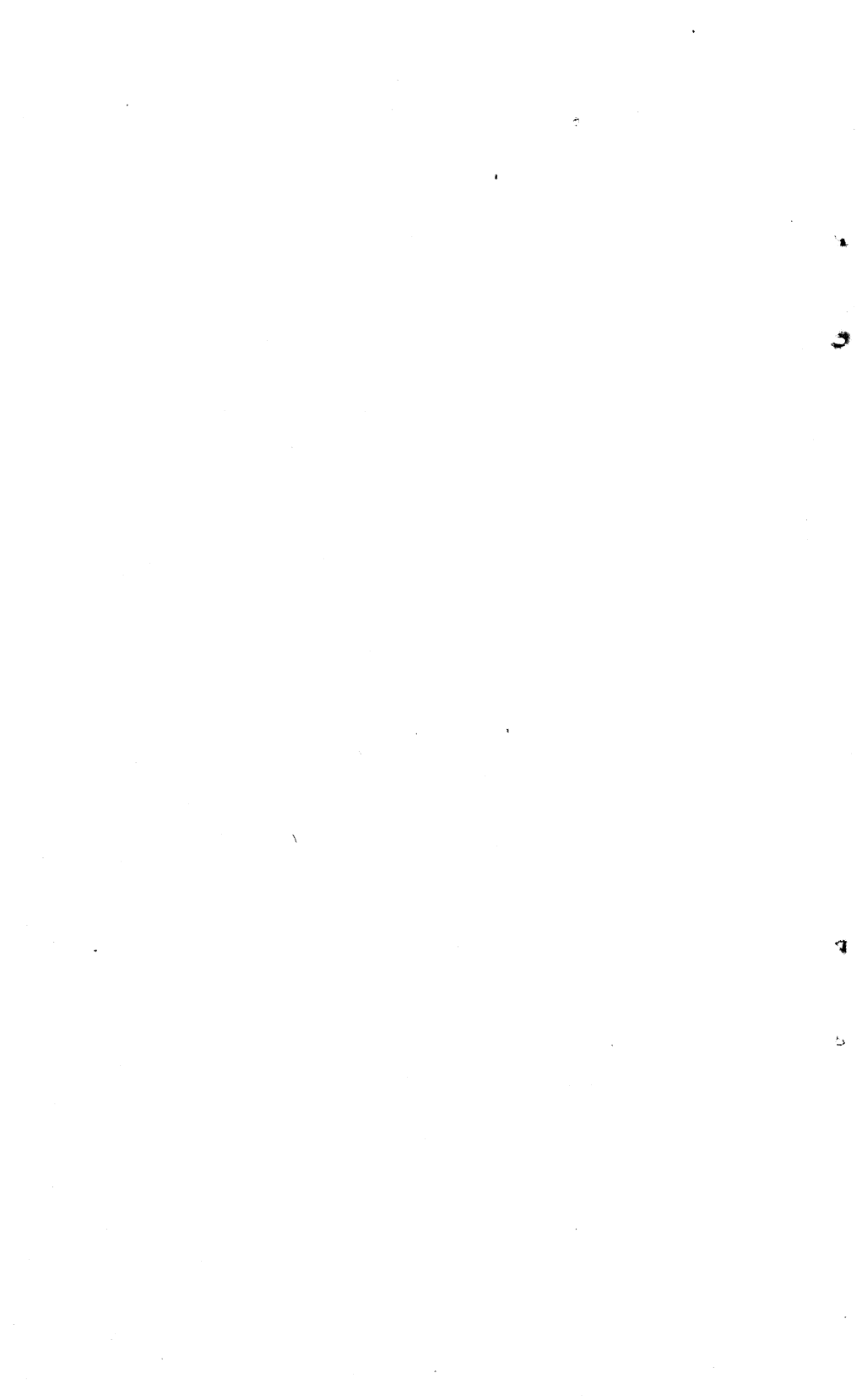


SANTO DOMINGO GATE, 1902, BEFORE WIDENING.





SANTO DOMINGO GATE, 1903, AFTER WIDENING.



FISCAL YEAR 1904.

The outlook for increased revenue for the city for 1904 is encouraging, and the estimated revenues, based upon the collections for the past year, are as follows, providing no change occurs in the revenue laws:

Statement of estimated revenues, fiscal year 1904.

[Amounts stated in United States currency.]

Land tax	\$1,100,000
Industrial tax	240,000
Stamp sales	70,000
Certificates of registration.....	45,000
Matadero fees	75,000
Market fees	120,000
Licenses	170,000
Live-stock registration	600
Vehicle tax	25,000
Vehicle equipment	1,250
Municipal Court fines.....	68,000
Justice of peace fees and fines.....	2,200
Sheriff's fees	4,500
City Attorney's fees.....	150
Rents	7,000
Miscellaneous	2,000
Certificates, electric installation.....	1,500
Pound receipts	1,500
Registration of cocheros.....	1,000
Public-health fees, cemeteries.....	8,000
Water service	90,000
Building permits	8,000
Weights and measures.....	3,500
Miscellaneous, city engineer.....	1,000
Register of deeds.....	8,000
Total	2,053,200

The estimated expenditures for the fiscal year 1904, based upon appropriations already made and the necessities of the city for public improvements, etc., are as follows:

Statement of estimated expenditures, fiscal year 1904.

Appropriation Act 804, current expenses July 1 to December 31	\$969,015.00
Appropriation Act 820, public works, July 1 to Decem- ber 31	351,648.00
Estimated expenses January 1 to June 30, 1904.....	900,000.00
Estimated public works, January 1 to June 30, 1904.....	200,000.00
Total	2,420,663.00

Statement of prospective condition of city's finances, close of fiscal year 1904.

CREDITS.

Balance from fiscal year 1903.....	\$205,152.36
Total revenues (estimated).....	2,053,200.00
Thirty per cent expenses borne by Insular Government..	726,198.90
<hr/>	
Total credits	2,984,551.26

DEBITS.

Total expenses (estimated).....	2,420,663.00
<hr/>	
Estimated balance June 30, 1904.....	563,888.26

From the above statements it can be seen that the city's financial condition is improving each year—even with increased expenditures the balance at the close of the next fiscal year should be in excess of half a million dollars. However, agitation along the lines of revised internal-revenue taxes will no doubt cut from the city's revenue in the near future at least a quarter of a million dollars. This, however, should be partially covered by an increased license of many industries which are now paying both license and industrial tax. It is also understood that a reduction of the land tax is being considered by the Commission from 2 to $1\frac{1}{2}$ per cent. This would reduce the revenues by about \$175,000, and there is also reason to believe that a bond issue for the construction of a new water system should be negotiated during the present fiscal year, and an allowance for interest and sinking fund added to the estimated expenses, which would probably consume \$100,000, and thus, although the margin as shown by the estimated balance appears to be large, it will, in the event of any change in the revenue laws or the consummation of the bond issue, not be excessive to cover such contingencies.

In addition to this it may be stated that the last appropriation act for the current expenses of the city was hardly sufficient to meet these expenses, and deficiency appropriations will probably be necessary.

Several amendments to the Charter have been under consideration by the Board, and among them is one which has for its object the change of the date upon which the annual report of the Board must be forwarded to the Civil Governor, from the 1st day of August to the 1st day of September. It is the experience of the past two years that the heads of the various departments of the city have been unable to present their reports in proper season to enable the Board to carefully consider and formulate its own report. It is believed that such an extension of time would result in more complete and satisfactory reports.

In conclusion the Board desires to acknowledge the faithful and efficient service rendered by the heads of departments and the employees,

Americans and Filipinos, in all branches of the city government. With the evidence of more complete peace and the numberless signs of increasing prosperity, the work of nearly all the officers has grown in detail and volume. The presence of cholera and smallpox has surrounded the work of some departments with many dangers, but the services of those so employed have been given faithfully and without fear.

Very respectfully,

A. CRUZ HERRERA, *President.*

CHAS. H. SLEEPER, *Member.*

P. G. McDONNELL, *Member.*

The CIVIL GOVERNOR,

Manila, P. I.

REPORT OF THE SECRETARY.

MUNICIPAL BOARD OF MANILA,

OFFICE OF THE SECRETARY,

Manila, September 28, 1903.

GENTLEMEN: I have the honor to submit herewith the annual report of the secretary of the Municipal Board for the fiscal year ending June 30, 1903:

During the period from June 24 to December 29, while the secretary, Mr. A. L. B. Davies, was acting as a member of the Board in the absence of Mr. C. H. Sleeper, the office of secretary was filled by Mr. Bert Eddy, chief clerk of the Board. On December 29, Mr. Sleeper having returned and taken his place on the Municipal Board, Mr. Davies assumed the office of secretary, and continued as such until March 9, when he resigned to accept the appointment of local purchasing agent. Pending the appointment of his successor Mr. O. F. Ricard, a clerk of the Board, was designated as acting secretary and continued in that position until May 1, when the Board appointed the present incumbent.

In accordance with the provisions of section 5 of the Manila Charter, which define the duties of the secretary, there has been kept a full record of the proceedings of the Board, both legislative and executive, and all documents relating thereto have been properly recorded and filed. Records have been kept of all ordinances and amendments to ordinances, and the same have been published in the English and Spanish languages as prescribed by law. There being a large portion of the inhabitants of Manila, however, who are unable to read either English or Spanish, a contract has also been made for the publication of all municipal ordinances and announcements in Tagalog.

On February 5, by resolution of the Board, all of the old Spanish municipal records pertaining to the city of Manila, which up to that time had been in the custody of the City Attorney, were transferred to the office of the Secretary of the Municipal Board, and the task of filing these papers with a view to easy and accurate reference was undertaken by this office and is being completed as rapidly as their condition will permit. An item of \$600 has been included in the appropriation by the Board to be used to provide suitable steel filing cases, so that these and other documents may be properly safeguarded.

While there have been no demands for certified copies of city records

or documents except from Government officials for official use, for which no charge is made, the office is prepared to furnish promptly copies of any city document which may be called for.

A forfeiture of \$500 by Frank Twombly for failure to execute a contract for the building of additions to the Arranque Market, and a forfeiture of \$150 by José Gutierrez for failure to execute a lease for city property on Calle Tabora, are the only municipal funds collected during the year by this office.

During the fiscal year just ended the Municipal Board sat in session 304 times and considered 7,380 items of municipal business, of which, for the purpose of assisting the Board in taking final action, 97 were referred to the Advisory Board for their consideration and recommendations. No written communications, however unimportant, have been ignored by this office; 5,020 letters have been received and, based upon the action of the Board, 5,893 letters have been written.

There were presented to the Board thirty-two ordinances, of which seventeen were enacted, while fifteen have passed one or two readings. Twenty-three contracts were entered into by the city during the year. Deeds were executed for the sale of four pieces of city property and for the purchase of three pieces of property by the city. There were four leases for city property executed during the year. Leases entered into by the city for private property are not shown in this report, as the same were entered into by the Superintendent of Buildings and Illumination and were merely authorized by the Board.

The ordinances, contracts, leases and deeds, in detail, were as follows:

- No. 34. An ordinance amending Ordinance Numbered Two, enacted by the Municipal Board December fifth, nineteen hundred and one, entitled "An ordinance relating to gambling."
- No. 35. An ordinance establishing a public slaughterhouse and providing for the regulation, inspection, and use thereof.
- No. 36. An ordinance relating to the sale and supply of electricity and telephone service and the inspection and installation of electric wires, meters, and other apparatus.
- No. 37. An ordinance prescribing the fees to be charged by the secretary of the Municipal Board for certified copies of city records and documents.
- No. 38. An ordinance relating to guest registers in hotels and lodging houses.
- No. 39. An ordinance amending Ordinance Numbered Nine, issued by the Provost-Marshal-General June twelfth, nineteen hundred and one, entitled "An ordinance relating to licenses and permits," as amended by ordinances Numbered Seventeen, Twenty-nine, and Thirty-two, enacted by the Municipal Board.
- No. 40. An ordinance relating to exits and fire protection in public halls and theaters.
- No. 41. An ordinance amending Ordinance Numbered Forty entitled "An ordinance relating to exits and fire protection in public halls and theaters."
- No. 42. An ordinance relating to pawnbrokers.
- No. 43. An ordinance relating to the misuse of and obstruction of approach to police and fire-alarm apparatus and systems.

- No. 44. An ordinance granting Charles M. Swift a franchise to construct an electric street railway on the streets of Manila and its suburbs, and a franchise to construct, maintain, and operate an electric light, heat, and power system in the city of Manila and its suburbs.
- No. 45. An ordinance amending Ordinance Numbered Thirty-nine, enacted by the Municipal Board January twenty-third, nineteen hundred and three, by which is again amended Ordinance Numbered Nine, issued by the Provost-Marshall-General June twelfth, nineteen hundred and one, entitled "An ordinance relating to licenses and permits."
- No. 46. An ordinance providing regulations for the government of the Carriedo water supply of the city of Manila.
- No. 47. An ordinance regulating the manufacture, storage, sale, transportation, and use of gunpowder, gun cotton, dynamite, nitro-glycerine, calcium carbide, benzine, gasoline, turpentine, petroleum, tar, pitch, resin, and all other highly explosive or combustible materials.
- No. 48. An ordinance amending Ordinance Numbered Four, issued by the Provost-Marshall-General May second, nineteen hundred and one, entitled "An ordinance relating to the collection of garbage and rubbish," as amended by Ordinance Numbered Seven, enacted by the Municipal Board December twenty-fourth, nineteen hundred and one.
- No. 49. An ordinance amending Ordinance Numbered Ten, issued by the Provost-Marshall-General June nineteenth, nineteen hundred and one, entitled "An ordinance regulating the use of public vehicles."
- No. 50. An ordinance amending Ordinance Numbered Forty-six, enacted by the Municipal Board April first, nineteen hundred and three, entitled "An ordinance providing regulations for the government of the Carriedo water supply of the city of Manila."

Ordinances have been introduced and considered and given one or two readings, but final action thereon withheld, as follows:

Amending the building ordinances in the matter of the construction of balconies, projections, arcades, etc.

A general health ordinance for the city of Manila.

Regulating plumbing and the licensing of plumbers.

Relating to immoral publications.

Relating to the ringing of church bells and the making of loud and unusual noises.

A proposed substitute for Ordinance No. 36, regulating the sale and supply of electricity and telephone service.

Establishing Bancusay fish market.

Providing for the quarantine of contacts of bubonic plague and smallpox.

Permitting cable companies to lay pipe lines from stations in Malate to offices in Binondo.

Relating to the slaughter of suckling pigs. (Amendment to Ordinance No. 35, Municipal Board.)

Defining the powers and duties of health inspectors.

Amending the gambling ordinance (Ordinance No. 2, Municipal Board) by the exemption of race tracks and certain parlor games from the provisions of the ordinance.

Regulating the fire hydrant service within the city.

Repealing section 42 of Ordinance No. 11, Provost-Marshall-General, which requires residents of unlighted streets to hang out lights from their houses.

Relating to the filling and terrepleining of private property for the abatement of nuisances.

Contracts entered into by the Board during the fiscal year 1903.

No.	Contractor.	Nature of contract.	Date.	Amount.
1	La Democracia -----	Publishing ordinances and advertisements in Spanish.	July 1	1 cent, Mexican, per line for advertising; ordinances free.
2	Manila American ----	Publishing ordinances and advertisements in English.	July 2	Ordinances, 5 cents, Mexican, per line; advertising 8 cents first insertion, 5 cents thereafter.
3	Albert Bryan -----	Painting matadero -----	July 21	\$1,650 (Philippines currency).
4	Rafael Machuco, Go-Tauco.	Construction Paco police station.	Aug. 7	\$4,900.
5	Henry W. Peabody & Co.	Erection garbage crematory -----	Aug. 14	\$50,000.
6	John F. McKinnon ---	Construction addition to city stables.	Aug. 18	\$6,998.
7	do -----	Construction San Nicolas fire station.	Sept. 11	\$9,625.
8	Tomas Reyes -----	Transportation of meats from Matadero to markets.	Sept. 16	Schedule of rates.
9	S. C. Choy & Co -----	Painting San Fernando police station	Oct. 17	\$1,400 (Philippines currency).
10	Delmar W. Smith ----	Building public tenement houses.	Dec. 3	\$5,890.
11	Sy Chuy Chim -----	Feeding prisoners in police stations.	Dec. 6	Oriental, 45 cents per day; others, 65 cents, Mexican.
12	El Comercio -----	Publishing ordinances and advertisements in Spanish.	Jan. 13	Advertising, $\frac{1}{4}$ cent, gold, per line; ordinance free.
13	Manila American ----	Publishing ordinances and advertisements in English.	Jan. 20	10 cents per line first insertion, 1 cent thereafter.
14	Arthur F. Allen -----	Construction of three garbage scows.	Feb. 12	\$6,000.
15	Cull & Maddy -----	Painting Santa Cruz fire station.	Feb. 16	\$810.
16	Placido Dizon -----	Privilege of cutting grass on the moat and on the glacis of the city.	Feb. 28	\$115, Mexican, per month.
17	Frank Twombly -----	For driving piles at the garbage crematory.	Mar. 7	\$2,500, Mexican.
18	B. W. Cadwallader & Co.	Furnishing tables for Anda Street Market.	Mar. 10	\$1,476.
19	Robert V. Dell -----	Burial of pauper dead -----	Mar. 19	\$10 for plain coffins, \$13 for metallic.
20	Salvador Farré -----	Repairs to Ayala Bridge -----	June 12	\$1,479.
21	Delmar W. Smith -----	Construction of addition to Ar-ranque Market.	May 28	\$8,873.
22	Pascual Poblete -----	Publishing ordinances in Tagalog.	June 22	Two cents, Mexican, per line.
23	El Comercio -----	Publishing ordinances and advertisements in Spanish.	June 25	One cent, gold, per line.

The following real property of the city was sold during the fiscal year, viz:

To Generio Herredia, on December 2, 1902, a piece of land 44.48 square meters in area, situated at the corner of Calle Soler, Tondo, and the road known as "Calle para el Mercado"; consideration, \$202.68, United States currency.

To José Machuca, on February 13, 1903, a piece of land 33.54 square meters in area, situated at the corner of Calles Azcarraga and Antonio Rivera, Tondo; consideration, \$262.14, United States currency.

To Pedro Sy Guia, on May 10, 1903, a piece of land 97.79 square meters in area, situated on Calle Azcarraga, near Antonio de Rivera, Tondo; consideration, \$489.95, United States currency.

To Luisa Lichauco, on May 23, 1903, a piece of land 46.99 square meters in area, situated on Calle Jaboneros, San Nicolas; consideration, \$1,500, United States currency.

The following real property was purchased by the city during the fiscal year, viz:

From Ramon Fabie y Gutierrez, a piece of property at the corner of Calles Camba and Lara, San Nicolas, to be used for street purposes; date, November 19, 1902; consideration, \$206.30, United States currency.

From Doña Maria Barbara Padilla, a piece of land on Calle Sevilla, San Nicolas, to be used for street purposes; date, November 25, 1902; consideration, \$783.93, United States currency.

From Tomas Rodriguez y Lopez, a piece of land 42.96 square meters, situated at the corner of Calles Jolo and Meisic, to be used for street purposes; date, April 24, 1903; consideration, \$243.36, Mexican currency.

The following city land was leased during the fiscal year, viz:

To Fred H. Hilbert, a piece of land in the rear of No. 249 Calle Real, Malate; for two years and four months from January 1, 1903, at a rental of \$100, United States currency, per annum.

To Robert J. Harrison and J. W. Marker, the city land at the corner of the Escolta and Calle Nueva, upon which is situated the kiosk; for five years from June 1, 1903, at a monthly rental of \$155, United States currency.

To Joseph H. Hartman, a piece of land on the Estero Binondo, just north of Calle Soledad; for nine years and two months from October 3, 1902, at a monthly rental of \$7.88.

To Vicenta Rodriguez, a piece of land in block 82, Tondo, for two years from August 17, 1903, at an annual rental of \$80, United States currency.

JOHN M. TUTHER,

Secretary of the Municipal Board.

THE MUNICIPAL BOARD OF MANILA.

REPORT OF THE DISBURSING OFFICER.

CITY OF MANILA,
OFFICE OF DISBURSING OFFICER,
Manila, P. I., August 21, 1903.

GENTLEMEN: In compliance with the provisions of the City Charter, I have the honor to submit herewith my report of the business of this office for the fiscal year ending June 30, 1903, and also a summary report of the work connected with the office.

The scope of the duties of this office is narrowly defined by law to consist of "the disbursing of all moneys drawn from the Insular Treasury pursuant to appropriations made by the Philippine Commission," and in accounting for the same "in such a manner as the Auditor for the Philippine Archipelago may prescribe." In this respect, I believe, the law has been strictly complied with. In addition to the foregoing prescribed duties the Municipal Board has made it part of the work of the disbursing office to perform in part those functions devolving upon the city comptroller in the ordinary form of municipal government, and to keep such records in detail of the expenses of the city of Manila as the Board might require from time to time for statistical purposes and as a basis for estimating amounts of required appropriation.

The work of the department is carried on by the disbursing officer and a meager corps of three able assistants.

Realizing that the salary list of the city is very large and that every employee desires his pay promptly on the last day of the month, to satisfy which, however, would be a physical impossibility, every effort has been exerted to so carefully systematize the salary payments by schedule as to accommodate the largest number of employees in the shortest period of time.

Ten days are required during the first part of each month to pay off all of the employees of the city, including those located outside of the city, at San Juan del Monte, the pumping station at Santolan, and the rock quarry on Talim Island.

Funds to the amount of \$400,000, Mexican, are disbursed monthly, of which sum about \$250,000 go toward paying the salaries of the city's 4,250 employees, and the fair portion of this sum is paid over the disbursing office counter in actual cash, which, owing to the cumbersome monetary system, entails considerable manual labor in the hand-

ling of these funds, it having been found that over a ton of silver dollars are passed over the counter daily during the first ten days of each month when the pay rolls are being paid.

In this connection, it may be a matter of interest to note that 44 policemen or 53 peones (laborers) can be paid in the same space of time that it requires to pay one lady school-teacher.

It has been observed with some pride that the Insular Government has to a certain extent utilized the disbursing office as a preparatory school of instruction for disbursing clerks, inasmuch as this office claims the honor of having trained and furnished to the Insular Government two of its most capable and efficient disbursing officers, viz, Mr. A. J. Robertson, chief paymaster Philippines Constabulary, and Mr. Paul A. Weems, disbursing officer of the Bureau of Coast Guard and Transportation, both of whom were formerly clerks in this office.

In conclusion I take pleasure in expressing my appreciation of the deep interest manifested by the clerks of this office in the execution of their duties and their untiring efforts to perfect the efficiency of the office, and especially their uniform courtesy toward all persons whose business brought them in contact with the office.

Very respectfully,

R. C. BALDWIN,

Disbursing Officer Municipal Board.

The MUNICIPAL BOARD OF MANILA.

Statement of expenditures for the city of Manila during the fiscal year 1903.

[Amounts stated in Mexican currency.]

MUNICIPAL BOARD.

Nature of expenditure.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Aggregate.
Salaries and wages:					
Members of Board -----	\$5,581.25	\$7,460.00	\$11,772.00	\$12,531.25	\$37,344.50
Secretary's office -----	5,396.33	6,823.43	7,526.10	11,314.47	31,060.33
Disbursing officer -----	2,669.47	4,000.96	4,923.77	6,433.47	18,027.67
Advisory Board -----	971.34	1,889.56	2,592.92	3,625.03	9,078.85
			1,867.32	12,453.25	14,320.57
Contingent expenses:					
Office supplies, advertising etc -----	544.60	707.66	1,853.98	1,710.50	4,816.74
Care of municipal prisoners in Bilibid -----	8,913.08	11,661.35	13,896.69	20,678.49	55,149.74
Music for Luneta concerts. -----	940.00	1,492.00	1,714.00	2,497.50	6,643.50
Official emergency transportation -----		31.60	56.50	8.90	97.00
Purchase of property for street extensions -----		2,475.60			2,475.60
Half salary and subsistence, employees -----		654.31	840.39		1,494.70
Contingent expenses, board of tax revision -----			471.61	2,971.80	3,443.41
Office supplies, Court of Land Registration -----			1,517.42		1,517.42
Contingent expenses, Register of Deeds -----			14.30		14.30
Total -----	25,016.07	37,196.47	49,047.00	74,224.66	185,484.20

Statement of expenditures for the city of Manila during the fiscal year 1903—Continued.

LAW DEPARTMENT.

Nature of expenditure.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Aggregate.
Salaries and wages:					
Office City Attorney	\$5,671.34	\$9,506.42	\$10,454.39	\$12,469.56	\$38,101.71
Office Prosecuting Attorney	5,535.28	11,896.67	13,562.15	14,631.18	45,625.28
Sheriff's office	3,172.50	6,470.00	7,763.05	9,916.64	27,322.19
Municipal courts	5,209.10	8,268.06	8,220.83	7,101.00	28,798.99
Justice of peace courts	1,112.30	1,765.48	1,874.35	2,255.94	7,008.07
Register of Deeds			815.72	3,217.27	4,032.99
Contingent expenses:					
Office supplies, advertising, etc	1,595.01	4,469.85	1,330.38	3,148.29	10,543.53
Court costs, fees, etc	161.49	432.70	612.93	1,061.65	2,268.77
Official emergency transportation	100.00	168.88	353.20	98.00	720.08
Maintenance prison van		150.89	421.22	1,435.53	2,007.64
Contingent expenses, Register of Deeds				708.43	708.43
Total	22,557.02	43,128.95	45,408.22	56,043.49	167,137.68

FIRE DEPARTMENT.¹

Salaries and wages:					
Regular force	\$10,333.16	\$29,078.04	\$36,216.69	\$57,132.58	\$132,760.57
Temporary force	5,717.03				5,717.03
Contingent expenses:					
General supplies	6,733.32	5,137.89	4,210.58	10,733.56	26,815.35
Emergency transportation	11.75				11.75
Installation fire and police alarm system ¹	11,893.75	8,040.94	3,991.30		23,925.99
Equipment:					
Equipment of firemen	309.10		1,211.35	166.32	1,686.77
Equipment of apparatus	542.10	100,815.00	1,689.82	5,581.96	108,629.63
Repairs to equipment	279.29	476.43	877.48	900.05	2,533.25
Furniture for fire stations			108.83	106.65	215.48
Purchase of fire-alarm system			103,785.22		103,785.22
Installation of fire-alarm system ¹			10,675.19	4,176.09	14,851.28
Purchase of testing instruments				4,682.05	4,682.05
Total	35,820.25	143,548.30	162,766.46	83,479.36	425,614.37

¹ Funds for the installation of the fire and police alarm system were appropriated for under both contingent expenses and equipment. Total cost of installing system, \$38,777.27.

POLICE DEPARTMENT.

Salaries and wages:					
Office force	\$6,535.67	\$11,415.45	\$12,025.26	\$15,959.83	\$45,936.21
First-class policemen and officers	132,091.43	207,131.30	223,664.34	283,860.54	846,747.59
Second and third class police	39,590.84	62,864.99	70,252.48	90,456.03	263,164.34
Detective bureau	8,824.22	14,468.26	15,242.03	19,853.82	58,387.83
River and harbor police	14,721.58	23,373.43	24,303.69	30,433.46	92,832.16
Laborers in public pound	7.05	190.20	237.60	301.50	736.35
Special cholera police	12,282.02	4,734.78	3,597.10	3,617.34	24,231.24
Contingent expenses:					
Secret-service fund	174.92	498.77	297.62	748.60	1,719.91
General supplies, repairs, etc	8,825.71	4,803.45	7,312.88	6,536.47	27,478.51
Subsistence of prisoners in police stations	1,610.76	1,821.88	1,723.14	2,298.76	7,449.54
Emergency transportation	1,636.25	2,784.03	2,761.00	3,657.65	10,838.93
Equipment:					
Purchase police-alarm system			110,396.00	2,488.29	112,884.29
Equipment	606.65	2,917.00	443.30	1,932.61	5,899.56
Total	226,907.08	337,003.54	472,256.44	462,139.40	1,499,306.46

Statement of expenditures for the city of Manila during the fiscal year 1903—Continued.

DEPARTMENT OF ENGINEERING AND PUBLIC WORKS.

Nature of expenditure.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Aggregate.
Salaries and wages:					
Classified employees	\$27,052.81	\$40,449.67	\$48,764.98	\$76,904.89	\$193,172.35
Unclassified employees	32,511.47	53,601.18	59,995.66	77,122.95	223,231.26
Ordinary labor	49,618.10	87,589.00	84,673.65	116,621.09	338,501.84
Public works:					
Repairs to city bridges	2,635.22	3,588.36	5,601.23	13,886.86	25,711.67
Purchase and transportation of road material	16,226.70	53,136.74	20,140.97	24,444.07	113,948.48
Purchase of forage	14,177.32	14,967.41	17,681.81	25,437.10	72,263.64
Repairs to sewers and drains	6,825.86	1,553.86	3,879.84	5,659.41	17,918.97
Repairs to city stables and corrals	4,947.17	19,600.44	1,916.55	1,118.01	27,582.17
Purchase of coal for crematories, etc	4,931.28	3,732.03	5,868.96	7,587.75	22,120.02
Purchase of tools, hose, etc	2,570.21	2,782.54	9,152.08	3,689.98	18,194.81
Purchase of horseshoeing materials	249.75	1,532.20	1,354.57	1,747.14	4,883.66
Repairs to harness, wagons, and launches	4,884.35	4,575.87	5,238.54	10,228.62	24,927.38
Maintenance of grounds and parks	2,494.35	1,079.58	173.51	5,151.13	8,898.57
Maintenance of rock quarry	8,057.71	9,781.31	4,372.34	10,677.01	32,888.37
Repairs to Santolon road			3,833.50		3,833.50
Repairs to markets and municipal buildings	5,130.57	12,392.53	14,211.46	13,224.44	44,959.00
Supplies, cleaning and care public buildings	987.05	4,554.66	208.76	2,245.05	7,995.52
Maintenance of electric-light service	14,052.52	14,203.47	25,429.22	42,322.40	96,007.61
Repairs and increase to electric service	1,293.85	215.32	2,901.41	859.13	5,269.71
Oil for lights in public buildings	523.47	460.02	734.61	349.84	2,067.94
Maintenance and repairs to Arraque Market		3,591.60			3,591.60
Maintenance of water service	21,475.07	36,336.02	39,773.57	39,974.67	137,559.33
Repairs to Bridge of Spain	608.90	8,768.91	1,715.22		11,093.03
Repairs to Santa Cruz fire station	2,551.59	742.25		282.38	3,576.22
Maintenance of city shops	5,769.50	14,101.32	16,022.17	4,448.25	40,341.24
Construction of school buildings		115.94	2,532.18	1,327.45	3,975.57
Hire of bull carts and drivers	6,267.80	3,031.00	8,572.20	9,130.45	27,001.45
Purchase of stone crusher			7,417.41		7,417.41
Supplies and materials for cemeteries	13.73	104.39			118.14
Construction of San Nicolas fire station		2,703.12	15,051.69	18,094.32	35,849.13
Construction of garbage crematory		34,980.95	100,462.45	8,981.75	144,425.15
Repairs to Paco police station			484.59	286.95	771.54
Construction of tenement houses			15,314.00	73.52	15,387.52
Construction of Anda Street Market		5,511.80	9,560.98	4,258.50	19,331.28
Construction of scows		7,683.00	5,446.08	5,195.00	18,324.08
Construction of new streets and roads			12,715.79	28,188.78	40,904.57
Construction of garbage scows			237.44	14,568.80	14,806.24
Purchase of means of transportation		11,706.87	6,866.74	30,410.36	48,983.97
Purchase of steam launch			14,630.00		14,630.00
Purchase of street sprinklers		14,864.72			14,864.72
Purchase of matadero weighing machine			529.10		529.10
Repairs to crematories		561.60	1,658.15		2,219.75
Repairs to wharves			1,004.89	5,449.80	7,054.69
Veterinary supplies		1,261.42	384.35	517.33	2,163.10

Statement of expenditures for the city of Manila during the fiscal year 1903—Continued.

DEPARTMENT OF ENGINEERING AND PUBLIC WORKS—Continued.

Nature of expenditure.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Aggregate.
Public works—Continued.					
Settlement of claim for lost bancas		2,400.00			2,400.00
Erection of buildings for city pound		1,554.00			1,554.00
Supplies and repairs to launches			278.14	5,452.33	5,730.47
Purchase of fire hydrant			5,390.00	9,882.17	15,272.17
Contingent expenses:					
Office supplies, advertising, etc	1,015.06	621.42	585.26	3,020.22	5,191.96
Official transportation	1,110.90	2,124.57	2,633.87	3,958.00	9,827.34
Burial of pauper dead	633.31	60.00	110.00	1,595.96	2,399.27
Rent of schoolhouses, police stations	13,762.60	22,047.71	22,982.96	24,313.81	83,107.08
Rent of telephones	504.46	704.35		2,002.79	3,211.60
Clearing of grounds for new improvements	215.25	324.00	165.00		704.25
Block map of Manila	1,693.91	2,699.22	3,764.94	3,530.58	11,688.65
Per diem for United States Army city engineer	728.50	1,131.30	299.00		2,158.80
Purchase of Spanish block map of Manila			2,000.00		2,000.00
Subsistence supplies, Tondo fire sufferers				2,844.88	2,844.88
Incidentals		78.70			78.70
Total	255,520.36	509,606.37	615,271.82	667,065.92	2,047,464.47

DEPARTMENT OF ASSESSMENTS AND COLLECTIONS.

Salaries and wages:					
Regular force	\$19,342.63	\$33,171.04	\$40,911.60	\$57,896.81	\$151,322.08
Temporary force	9,725.20	14,382.07	4,574.90		28,682.17
Contingent expenses:					
Office supplies, advertising, etc	900.34	2,355.39	3,550.94	2,964.96	9,771.63
Emergency transportation	171.15	268.30	294.40	393.95	1,127.80
Tax refunds		717.58	686.56	386.29	1,790.43
Total	30,139.32	50,894.38	50,018.40	61,642.01	192,694.11

DEPARTMENT OF CITY SCHOOLS.

Salaries and wages:					
Office force	\$1,355.16	\$2,146.70	\$2,996.38	\$2,261.72	\$8,760.96
Night school-teachers	4,470.89	23,507.60	20,881.07	7,683.38	56,542.94
Native teachers	20,737.58	31,928.36	34,934.53	44,702.06	132,302.53
Contingent expenses, office supplies, stationery etc	676.30	37.50	188.12	2,063.04	2,964.96
Total	27,239.93	57,621.16	59,000.10	56,710.20	200,571.39

CONSOLIDATION OF DEPARTMENTS, CITY OF MANILA.

Municipal Board	\$25,016.07	\$37,196.47	\$49,047.00	\$74,224.66	\$185,484.20
Law Department	22,557.02	43,128.95	45,408.22	56,043.49	167,137.68
Fire Department	35,820.25	143,548.30	162,766.46	83,479.36	425,614.37
Department of Assessments and Collections	30,139.32	50,894.38	50,018.40	61,642.01	192,694.11
Department of City Schools	27,239.93	57,621.16	59,000.10	56,710.20	200,571.39
Police Department	226,907.08	337,003.54	472,256.44	462,139.40	1,498,306.46
Department of Engineering and Public Works	255,520.36	509,606.37	615,271.82	667,065.92	2,047,464.47
Total	623,200.03	1,178,999.17	1,453,768.44	1,461,305.04	4,717,272.68

Recapitulation of expenditures for the city of Manila during the fiscal year 1903.

[Amounts stated in Mexican currency.]

Name of department.	Salaries and wages.	Contingent expenses.	Public works.	Equipment.	Tax re-fund.	Aggregate.
Municipal Board	\$109,831.92	\$75,652.28				\$185,484.20
Law Department	150,889.23	16,248.45				167,137.68
Fire Department	138,477.60	50,753.09		\$236,383.68		425,614.37
Assessments and Collections	180,004.25	10,899.43			\$1,790.43	192,694.11
Department of City Schools	197,606.43	2,964.96				200,571.39
Police Department	1,332,035.72	47,486.89		118,783.85		1,498,306.46
Engineering and Public Works	754,905.45	123,212.53	\$1,169,346.49			2,047,464.47
Total	2,863,750.60	327,217.63	1,169,346.49	355,167.53	1,790.43	4,717,272.68

Disbursements made by city disbursing officer	\$3,714,727.67
Supplies purchased from Insular Purchasing Agent	911,404.55
Ten per cent of the amount of all supplies purchased from Insular Purchasing Agent as provided in Act No. 231	91,140.46
Total	4,717,272.68

Amounts expended for public improvement.

[Amounts stated in Mexican currency.]

Nature of expenditure.	Cost of labor.	Cost of materials.	Work performed under contract.	Total cost.
Construction of new streets and roads	\$3,610.50	\$37,294.07		\$40,904.57
Repairs to crematories	360.30	1,859.45		2,219.75
Construction of road material barges	11,140.00	7,184.08		18,324.08
Construction of tenement houses		73.52	\$15,314.00	15,387.52
Construction of Anda Street Market	2,231.50	22,748.00	7,993.62	32,973.12
Construction of Paco police station		771.54	13,250.00	13,021.54
Arranque Market (in process of erection)		3,591.60		3,591.60
Alteration and repair to old Arranque Market			7,050.00	7,050.00
Construction of San Nicolas fire station	1,175.60	6,484.76	28,188.77	35,849.13
Painting of San Fernando police station			1,400.00	1,400.00
Construction of city pound			10,554.00	10,554.00
Construction of new city stables			18,194.80	18,194.80
New addition to Paco police station			1,087.80	1,087.80
Construction of garbage scows			14,568.80	14,568.80
Improvements to city bridges	21,505.99	4,205.68		25,711.67
Improvement to sewers and street drains	5,462.35	12,456.62		17,918.97
Improvement of parks	1,242.55	7,656.02		8,898.57
Repairs to markets and municipal buildings	19,202.16	25,756.84		44,959.00
Maintenance of water service (exclusive of the salaries of authorized employees)	27,638.16	109,921.17		137,559.33
Improvement of the Bridge of Spain	6,280.78	18,986.52		25,267.30
Construction of garbage crematory	9,125.88	4,369.27	130,930.00	144,425.15
Total	108,975.77	263,359.14	247,531.79	619,866.70

Nature of expenditure.	Cost of labor.	Cost of materials.	Cost of the apparatus.	Total cost.
Police-alarm system			\$112,884.29	\$112,884.29
Fire-alarm system			103,785.22	103,785.22
Installation of fire and police alarm systems	\$14,663.17	\$24,114.10		38,777.27
Total	14,663.17	24,114.10	216,669.51	255,446.78

*Statement of expenditures during the fiscal year 1903, supplemental to fiscal year 1902.***Municipal Board:**

Salaries, Advisory Board.....	\$69.97
Office supplies	104.65
Total	174.62

Law Department:

Salaries, Office Prosecuting Attorney.....	128.01
Costs, fees, etc.....	20.14
Office supplies	170.07
Transportation	27.92
Total	346.14

Fire Department:

Salaries and wages.....	865.97
Equipment of apparatus.....	6,104.66
Equipment of firemen.....	984.50
Office supplies, advertising, etc.....	77.04
General supplies	198.49
Transportation	26.00
Total	8,256.66

Department of Assessments and Collections:

Salaries, regular force.....	88.55
Office supplies, advertising, etc.....	1,092.18
Total	1,180.73

Police Department:**Salaries—**

First-class police	1,078.33
Second and third class.....	76.42
Detective bureau	908.33
Special cholera police.....	9,136.57
Equipment	13,026.37
General supplies, repairs, etc.....	1,986.57
Transportation	504.63
Secret-service fund	8.00
Total	26,725.22

Statement of expenditures during the fiscal year 1903, etc.—Continued.

Department of City Schools:

Salaries—

Night school-teachers	1,472.97
Native school-teachers	691.30
Contingent expenses	2,514.09

Total	4,678.36
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Department of Engineering and Public Works:

Salaries—

Classified employees	913.37
Unclassified employees	226.35
Repairs to city bridges.....	531.73
Purchase, road materials.....	538.27
Repairs to sewers and drains.....	52.86
Purchase of coal, crematories, and launches.....	776.24
Purchase, tools, hose, etc.....	204.32
Repairs, harness, wagons, and launches.....	878.44
Maintenance of grounds and parks.....	73.75
Repairs to market buildings.....	240.39
Maintenance of electric-light service.....	9,198.86
Maintenance of city water service.....	220.92
Completion of Arroceros shops.....	321.49
Erection of buildings of city pound.....	4,000.00
Santa Cruz Bridge (balance structural material).....	659.38
Alteration and repair, Arranque Market.....	3,000.00
Repairs, Santa Cruz fire station.....	82.10
Paco police station.....	4,900.00
Anda Street Market.....	1,762.00
Repairs to Bridge of Spain (buckle plates).....	4,280.00
Office supplies, advertising, etc.....	208.02
Transportation	116.35
Burial of pauper dead.....	26.43
Rental of houses, lands, etc.....	324.93
Telephone service	101.00
Per diem of City Engineer.....	170.00

Total	33,807.21
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RECAPITULATION.

Municipal Board	\$174.62
Law Department	346.14
Fire Department	8,256.66
Assessments and Collections.....	1,180.73
Department of City Schools.....	4,678.36
Engineering and Public Works.....	33,807.21
Police Department	26,725.22

Total	75,168.94
-------------	-----------

NOTE.—All amounts pertaining to the fiscal year 1902 are stated in United States currency.

Recapitulation of all expenditures made from appropriations for the city of Manila during the period of July 1, 1902, to June 30, 1903.

[Amounts stated in Mexican currency.]

Department.	Fiscal year 1902.	Fiscal year 1903.	Salary and expense fund.	Total.
Municipal Board	\$419.09	\$185,484.20	-----	\$185,903.29
Law Department	830.74	167,137.68	-----	167,968.42
Fire Department	19,815.98	425,614.37	-----	445,430.35
Department of Assessments and Collections	2,833.75	192,694.11	-----	195,527.86
Department of City Schools	11,228.06	200,571.39	-----	211,799.45
Department of Engineering and Public Works	81,137.30	2,047,464.47	-----	2,128,601.77
Police Department	64,140.53	1,498,306.46	-----	1,562,446.99
Settlement Warrants drawn by Insular Auditor		1,116.28	\$3,174.03	4,290.31
Total	1 0,405.45	4,718,388.96	3,174.03	4,901,968.44

NOTE.—The amounts for the fiscal year 1902 were obtained in Mexican currency by reducing the United States currency amounts at the ratio of \$2.35 to \$1.

Number of employees paid monthly salaries by disbursing officer.

Month.	Municipal Board.	Law Department.	Fire Department.	Assessments and Collections.	Department City Schools.	Police Department.	Engineering and Public Works.	Total number.	Expense. ¹
1902.									
July	34	52	80	146	151	1,356	2,162	3,981	\$223,449.46
August	37	55	81	157	336	967	2,149	3,782	225,108.56
September	33	59	83	144	340	927	2,350	3,936	234,886.90
October	33	60	234	168	247	912	2,365	4,019	244,888.71
November	35	63	109	165	250	946	2,320	3,888	257,832.43
December	36	59	104	152	252	963	2,348	3,914	260,911.58
1903.									
January	34	64	117	137	263	935	2,493	4,043	268,406.22
February	40	73	121	142	295	915	2,483	4,069	271,199.15
March	65	66	123	147	224	931	2,385	3,941	268,601.20
April	40	64	130	148	158	946	2,778	4,264	260,719.84
May and June	80	121	255	310	423	1,861	5,393	8,443	518,720.57
Total	467	736	1,437	1,816	2,939	11,659	29,226	48,280	3,034,724.62

¹ Mexican currency.

Number of persons in the employ of the city June 30, 1903.

Department.	Americans.			Natives.			Grand total employed.
	Monthly.	Daily.	Total.	Monthly.	Daily.	Total.	
Municipal Board	17	-----	17	23	-----	23	40
Law Department	19	-----	19	45	-----	45	64
Fire Department	51	-----	51	46	33	79	130
Department of Assessments and Collections	26	-----	26	122	-----	122	148
Department of City Schools	2	-----	2	156	-----	156	158
Department of Engineering and Public Works	114	9	123	287	2,368	2,655	2,778
Police Department	425	-----	425	521	-----	521	946
Total	654	9	663	1,200	2,401	3,601	4,264

Statement of expenditures for the care of city prisoners confined in Bilibid Prison during fiscal year 1903.

Month.	Thirty-cent ration.	Twenty-cent ration.	Amount.	Total.	
				United States currency.	Mexican currency.
July-----	904	9,116	\$271.20 1,823.20	\$2,094.40	\$4,921.84
August-----	912	7,124	273.60 1,424.80	1,698.40	3,991.24
September-----	728	6,261	218.40 1,252.20	1,470.60	3,529.44
October-----	697	6,424	209.10 1,284.80	1,493.90	3,674.99
November-----	654	7,590	196.20 1,518.00	1,714.20	4,456.92
December-----	684	7,526	205.20 1,505.20	1,710.40	4,447.04
January-----	873	7,648	261.90 1,529.60	1,791.50	4,765.39
February-----	948	7,383	284.40 1,476.60	1,761.00	4,684.26
March-----	1,197	8,285	359.10 1,657.00	2,016.10	5,141.05
April-----	1,202	7,926	360.60 1,585.20	1,945.80	4,864.50
May-----	1,089	8,977	326.70 1,795.40	2,122.10	5,199.15
June-----	1,070	9,566	321.00 1,913.20	2,234.20	5,473.79
Total-----	10,958	93,826	-----	22,052.60	55,149.61

NOTE.—The 30-cent rations are for American and European prisoners and the 20-cent rations are for Filipino and Chinese prisoners.

REPORT OF ENGINEER IN CHARGE NEW WATER SYSTEM.

The present water supply for the city of Manila is drawn from the Mariquina River at Santolan, pumped through cast-iron pipes to an elevation on the hill to the west of the pumping station, and thence runs by gravity through a closed conduit and cast-iron pipe to the present deposito.

The deposito consist of a double series of underground chambers and has a capacity of about 60,000 cubic meters, or approximately 16,000,000 United States gallons.

The total capacity of the present pumping plant is about 7,500,000 gallons daily, which gives a per capita supply of 30 gallons, on the basis of the present census.

From the deposito the water is carried through a 26-inch cast-iron pipe to the city distributing system.

These works were built by the municipality under Spanish Government during the years from 1878 to 1882 and were opened to the public use on the 24th day of July, 1882.

As a preliminary to the investigation of the subject of an increase in the water supply, a determination of the present and future needs of the city is necessary and it here follows.

On the map of the city accompanying this report it will be noticed that the city consists of a central district, comprised within the fire limits, and a series of outlying barrios scattered along the numerous streets leading out from the business center.

Within the fire limits as marked no houses except of strong materials can be constructed, and within the next few years it is reasonable to assume that all buildings within these limits will be of strong materials, and naturally will sooner or later be equipped with an interior water supply.

For the inhabitants therefore contained within the fire limits a maximum daily per capita quantity should be provided.

In the districts outside the fire limits, though there are many houses of strong materials, the majority of the buildings are of light construction, unsuitable for the installation of interior water supply.

While the growth of the city, the installation of a sewer system, and the extension of the fire limits will in time increase the use of water from the city mains, it seems safe to conclude that a per capita supply of two-thirds that of the section within the fire limits will be ample.

No data is at hand to determine the average per cent of increase in

the population of the city per year, and an estimate of the increase in water consumption due to this cause must therefore to a large extent be assumed.

The census of the present year gives the population of Manila at 223,029, including 16,339 living in boats and also including 5,229 inhabitants of Santa Ana.

The Spanish census of 1883 gives the population of Manila as 230,407, showing a slight decrease during the past twenty years.

Lacking the usual incentives to a rapid increase in population, it would seem that a permanent average increase of 2 per cent would be ample to cover the probable increase.

The population by districts, given by the present census and hereto appended, indicates an approximate population within the fire limits of 140,000, and for this number the maximum daily per capita supply should be furnished.

There remains, then, the outside population of 83,000 to be furnished with the lesser daily per capita supply.

In determining the maximum and minimum per capita daily supply it will be necessary to take into consideration the effect of the installation of a sewer system, and the increased consumption due thereto.

The average daily per capita consumption is made up in general of the following four subdivisions:

(1) Domestic use; (2) commercial use; (3) public use; (4) loss and waste.

DOMESTIC USE.

The results of the careful investigations tabulated by Brackett of a number of American and European cities gives extremes of 6.6 gallons for the lowest class of houses and 59 gallons for the highest class of houses, and an average extreme of 11.2 gallons for the manufacturing town of Fall River, as compared with 44.3 gallons for Brookline, a wealthy suburb of Boston.

The domestic consumption of the city of London varies from 18.6 gallons for the middle-class districts to 25.5 gallons for the better-class districts.

The above citations are all in metered districts and may be safely used in the present investigation for Manila where the use of meters is general.

Taking into consideration the conditions prevailing in Manila, it seems that a supply for domestic purposes of 20 gallons per capita will be ample.

COMMERCIAL USE.

Under this head are grouped: office buildings and stores, railroads and street cars, factories, breweries, steamers and shipping, saloons, hotels, miscellaneous.

Statistics for New York City show a commercial consumption of 24 gallons per capita of total population; for Boston, 30 gallons; for Syracuse, 30 gallons; for Fall River, where most of the factories drew their water from outside sources, 2 gallons; in Yonkers, 27 gallons.

In all these cities the factory consumption is large, and the total commercial consumption per capita is without doubt largely in excess of the needs of Manila.

In view, however, of the possible development of the city along manufacturing lines, it is not considered advisable to reduce the estimates for this purpose below an ample limit and I have therefore fixed on 20 gallons per capita of total population daily for commercial use.

PUBLIC USE.

This includes the water used for schools, public buildings, street sprinkling, sewer flushing, water troughs, and fountains, parks, fires, blowing off dead ends, and miscellaneous public use.

The quantity necessary for these purposes has been carefully measured in a large number of cities, and the maximum and minimum averages have been determined at 5 gallons and 3 gallons per capita of total population.

On account of the long dry season in Manila and the street sprinkling incident thereto, the maximum amount of 5 gallons has been assumed in the present investigations.

LOSS AND WASTE.

This item may be of considerable importance. In a well-metered city it is caused by leakage in the mains, errors in the meters, and errors in measuring the actual amount of water delivered. Brackett gives 15 gallons per capita of total population as a minimum allowance from these causes.

As the carrying capacity of a long pipe decreases and leakage in the distributing system increases with age, the minimum quantity mentioned by Brackett is not deemed sufficient, and a quantity of 25 gallons per capita of population will be assumed in these computations.

Recapitulating the above estimates for these various purposes we have the following:

[Average number of gallons per capita daily.]	
Domestic	20
Commercial	20
Public	5
Loss and waste.....	25
Total	70

Concluded, therefore, that the present average maximum per capita consumption is 70 gallons, there remains the determination of the

increased consumption due to increase in population within a reasonable fixed time.

As a premise to this computation it should be stated that any system devised to meet existing conditions must be capable of expansion to meet conditions which may arise during the comparatively distant future. With this in mind it seems fair to assume an increase of 2 per cent compounded for a period of twenty years, leaving the cost of necessary extensions after this term to coming generations. Two per cent compounded for twenty years amounts to approximately 50 per cent, and 50 per cent of the estimated necessary present supply is 35 gallons per capita daily. Seventy gallons plus 35 gallons equals 105 gallons, and this amount will be assumed as the daily per capita supply for the residents within the fire limits.

Recapitulating all the above we have then as the necessary increased supply, as follows:

	Gallons.
150,000, at 105 gallons.....	14,700,000
83,000, at 70 gallons.....	5,810,000
Total	20,510,000

Which is the minimum daily supply which should be considered.

POSSIBLE SOURCES OF SUPPLY.

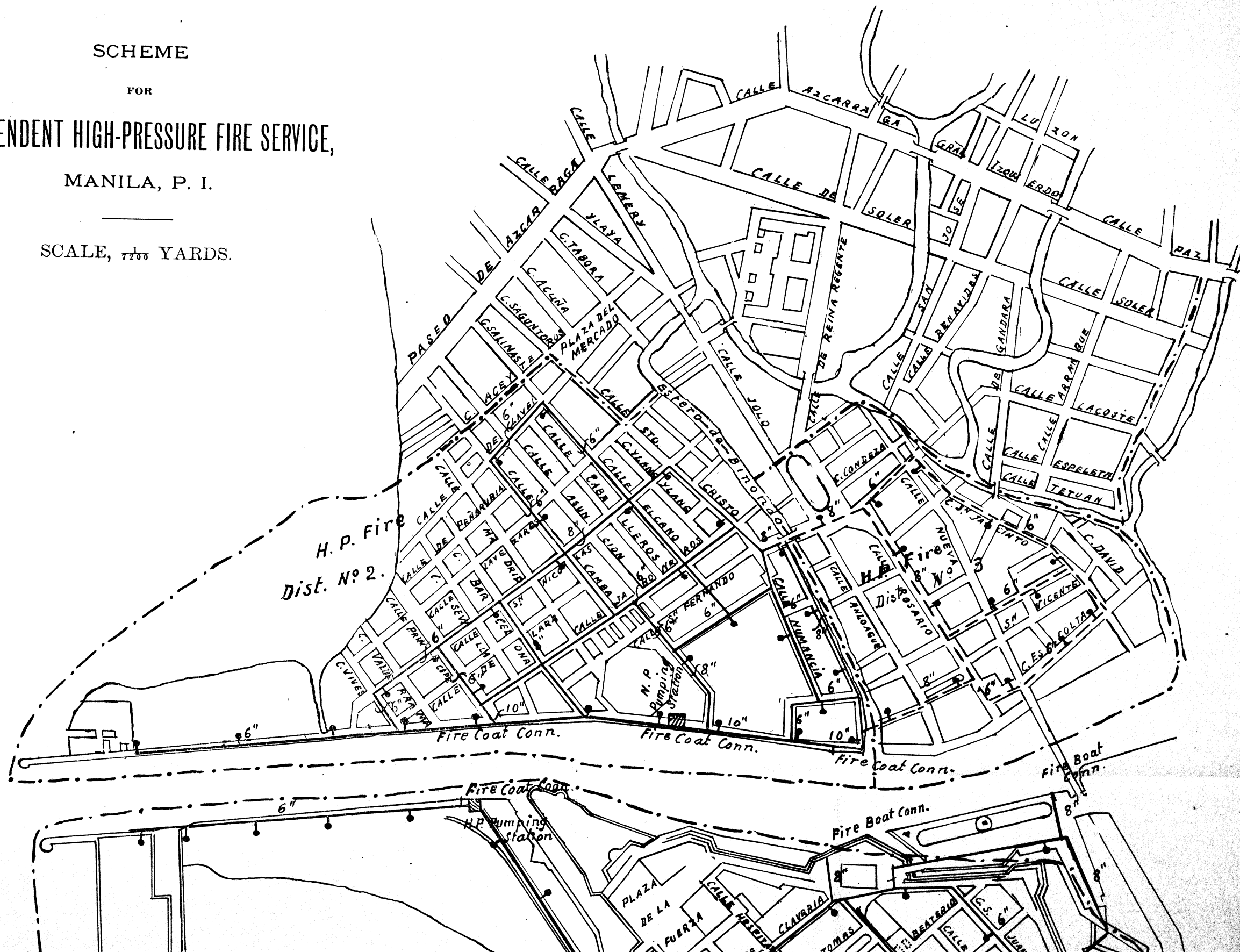
Situated in an alluvial plain, raised but slightly above sea level, and with a dense population, Manila must look to the mountains of the east for a possible source of supply. Laguna de Bay and the Pasig River can not be considered on account of the excessive pollution, both organic and inorganic.

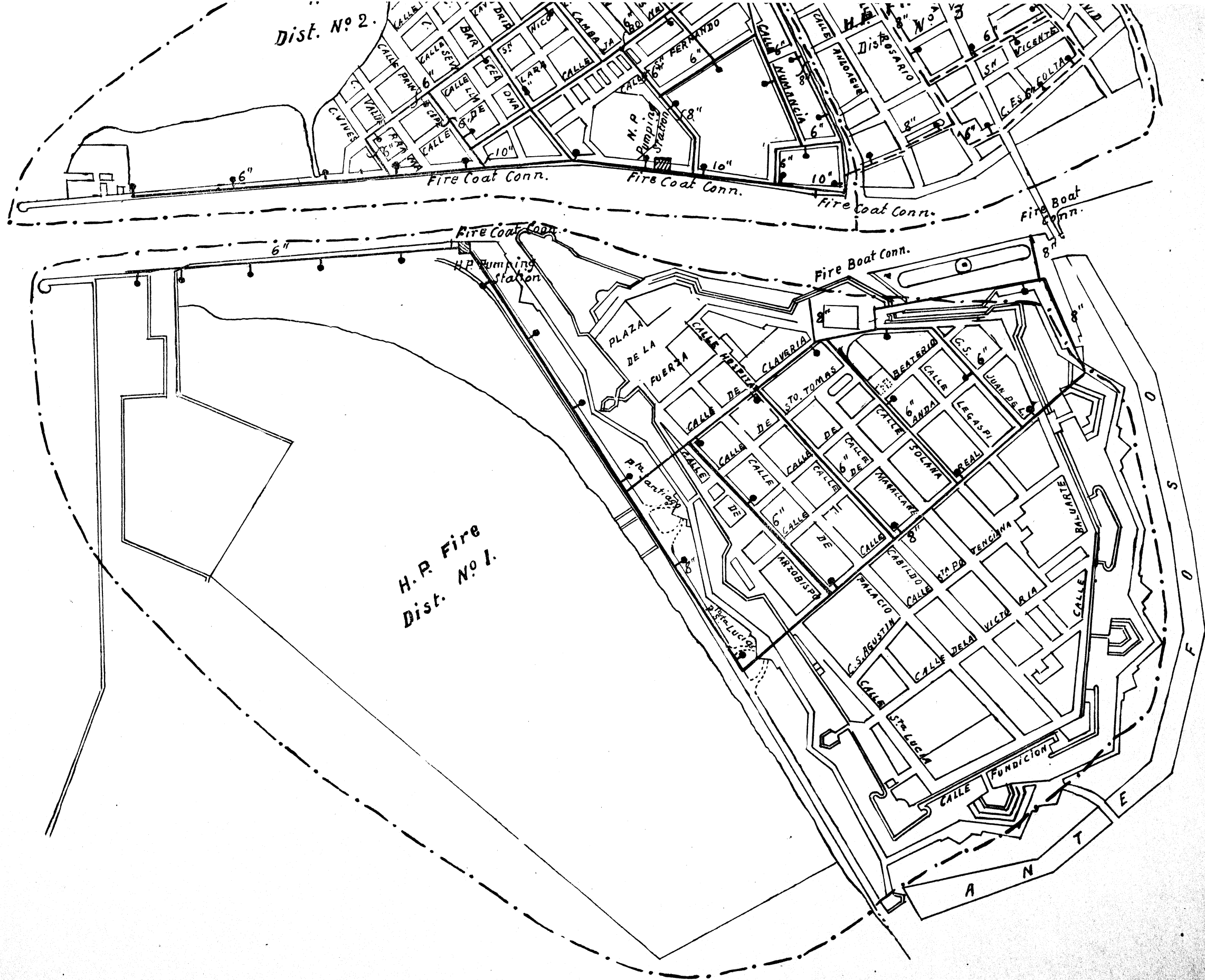
The choice of a source is narrowed then to the Maraquina River and adjoining watershed, and this fact was immediately recognized by the Spanish engineers who installed the present system.

The Maraquina River rises in the mountains directly east of Manila and flows in a northerly direction through a typical mountain valley for a distance of approximately 20 miles. Its course then changes to the west, and breaking through the first range of mountains east of Manila it emerges into the broad and fertile Maraquina Valley, where, turning to the south, it flows for some 20 miles nearly parallel to and in the opposite direction from its original course to its junction with the Pasig River. From its source to the town of Montalbon its watershed is an almost impenetrable forest, and with the exception of the small town of Boso Boso, at the head waters, the valley is almost entirely uninhabited. A few nomadic groups of semisavage mountaineers and a few woodcutters complete the tale of possible human pollution, and no difficulty should be experienced in reducing this danger to a minimum.

From Montalbon to the mouth of the river the valley is densely popu-

SCALE, $\frac{1}{7200}$ YARDS.





lated with several large towns on the banks of the river itself. As a consequence, the purity of the water at present supplied has only been maintained by a constant and vigilant quarantine system, alike expensive to the Government and irksome to the inhabitants of the valley.

The point of diversion for the new system should therefore be above the town of Montalbon, leaving the supply free from the danger of infection or the disadvantages of a quarantine patrol.

From the sources of the Maraquina River near Boso Boso to Montalbon it is confined on the west by a range of mountains running approximately north and south and on the east by the parallel range which constitutes the backbone of central Luzon. Between Antipolo and Boso Boso these ranges are joined by a narrow ridge which forms the southern boundary of the Maraquina watershed. Some 3 miles above the town of Montalbon the stream breaks through another cross range forming what is known as the "gorge," which is shown in the accompanying photographs. No extended survey has been made of the entire watershed, but, in general, the valley above the gorge has an exterior of 12 miles in a northerly and southerly direction with an easterly and westerly breadth of 5 miles, or a superficial area of 60 square miles, approximately.

Throughout its extent the valley and mountain slopes are nearly unbroken forest, and with the exception of a few hundred acres in the vicinity of Boso Boso no agricultural land is to be found. The only possible industry for 90 per cent of the watershed is lumbering, and the difficulties of transportation make this of doubtful value. Boso Boso is the only town within its limits, and contains some 300 inhabitants.

The residents have, however, diverted the stream through the streets, from which their water supply is drawn and in which all refuse is thrown and all washing and bathing is done. For the proper preservation and safeguarding of the purity of the water supply for the city of Manila it is essential that this town be removed and the entire area of the watershed be created a forest reserve and withdrawn from settlement.

RAINFALL AND RUN-OFF.

It is extremely gratifying in an investigation of such importance as the present one that data so complete and accurate as that of the Manila Observatory is available. Full reports covering the years from 1865 to 1898 are presented, and the maximum and minimum rainfall is given by years, months, and days. Though this data is collected at Manila the results may be assumed correct for the watershed.

From the tabulated results herewith presented it will be seen that the normal rainfall per year is 75.457 inches. Assuming the effective run-off at one-third of this, which is conservative, the result is far in excess of any possible requirements and fully four times the proposed yearly supply.

The rainfall, however, by months is very irregular, ranging from

normal of only 0.413 inch for the month of February to 14.925 inches for the month of September. During the observed period, in the single month of September, 1867, 57.862 inches of water fell, and 13.228 inches fell in a single day.

During the months from May to January, inclusive, the normal rainfall supplies an available run-off equal to or in excess of the proposed new supply, but during the remaining three months of the year the normal precipitation is little or nothing.

In notably dry years the rainfall for the months of December and January has failed, as, for instance, in 1896, when the precipitation for these months was, respectively, 0.008 and 0.039 inch.

The flow of the stream, however, from so large and well-wooded a watershed will continue without notable decrease for some time after the cessation of actual rainfall, and it seems safe to assume a natural supply for eight months in the year, leaving the remaining four months to be determined by actual gaugings.

While it is true that the gauging of a stream for a single season should not be relied upon where extreme accuracy is required, the records of the gaugings of the Spanish engineers during a season of extreme drought are available, as are also those of Lieutenants Brown and Casey in 1901.

The investigations of the Spanish engineer, Genevo Palacio, preceding the construction of the present system and carried through to the possibilities of a gravity supply, are complete, and during my own investigations have proved so accurate that the result of his gaugings and his notes of existing conditions are worthy of all credence.

In his report he says:

In June, 1867, I measured the stream in various localities, and though in this year it rained in February and May the average of my gaugings was 3.52 cubic meters per second. [This is equal to a daily supply of 80,000,000 gallons.]

Further he says:

After the great storm September, 1867, it did not rain until the middle of May, 1868. This state of affairs existing during my investigations has permitted me to determine the minimum flow of water after nearly six months without rain.

After reciting his methods of measurements and the formulæ employed therein, he gives his results as approximately one-half cubic meter per second, equal to a daily flow of 11,500,000 gallons. No gaugings of maximum flow have ever been attempted.

In May, 1901, Lieutenants Brown and Casey, by direction of the Provost-Marshal-General, made a survey of the Mariquina Valley and gauged the stream at various points. Although the month of May is at the close of the dry season, the results of their gaugings showed a surprising amount of flow, that at the gorge being given as 141.81 cubic meters per minute, or a daily flow of approximately 54,000,000 gallons.

No report is made as to a possible rainfall immediately before these gaugings.

My own gaugings were made in the present year during the month of May and at the close of an exceptionally dry season. Intelligent natives living along the river said that they had never seen the stream so low, and in every respect I believe the conditions to be similar to those of 1868 at the time of the investigations of Señor Palacio.

My gaugings were taken with a weir with end contractions, and, due to the pravity of the gravel bed of the river, are subjected to an increase of 20 per cent, estimated visually of the amount of water escaping, aside from the flow over the weir. The result gives a minimum daily flow of approximately 11,000,000 gallons, surprisingly close to the gaugings of Señor Palacio and mutually confirming the exactitude of the measurements taken.

Disregarding then the gaugings of Lieutenants Brown and Casey, which must have been due to exceptional conditions, it may be assumed that the minimum flow of the very driest years is 11,000,000 gallons daily. As this is only one-half of the needed supply, storage of the surplus waters during the rainy months becomes necessary. For a determination of the amount of storage necessary a careful examination of the monthly rainfall is essential.

Broadly stated, the run-off from a rainfall of 1 inch in any month will maintain a sufficient stream flow for the proposed supply. At the end of a dry season such a rainfall might not fulfill the above condition, while at the end of the rainy season it would probably exceed the requirements. Moreover, the cessation of rainfall is not followed by immediate diminution of stream flow. Señor Palacio points out that no noticeable diminution of the stream was observed until after January, 1868, though no rain had fallen since the September previous.

The normal rainfall is sufficient for nine months in the year; the minimum must be provided for, and the years of 1867 and 1868 noted by Señor Palacio will be used. For a period of nearly six months practically no rain fell. At the close of a rainy season the ground water is so large that a watershed may be relied upon to maintain a normal flow for the first two months. The flow will then gradually diminish until the absolute minimum is reached.

If, then, the average daily shortage in the third month be 5,000,000 gallons, in the fourth 7,500,000 gallons, in the fifth 10,000,000 gallons, and in the sixth 11,000,000 gallons, the resultant storage will be 1,000,000,000 gallons, or a full supply for the city with no accretions for forty-five days.

Should these estimates of the conditions likely to arise be exceeded and an abnormally dry season occur, the city's supply, though somewhat curtailed, would still suffice for its absolute needs, by means that will appear further on in this report.

The basis of the storage capacity of the system is, then, taken at 1,000,000,000 gallons.

EXAMINATION OF THE WATER.

As is to be expected in a mountain stream, the water of the Maraquina River above Montalbon at normal stage is in taste and physical characteristics all that could be desired. The stream consists of a series of deep pools joined by short stretches of rapids, and the sedimentation of the pools and aeration of the rapids purify and clarify the stream to the extreme. In the gorge itself the water is tasteless, odorless, and almost colorless. Its temperature is far below the water at the present pumping station. Under conditions of an extended hot spell and in the hottest part of the day the water in the gorge showed 82° F., while under exactly similar conditions the water at the pumping station showed 88° F., or a difference of 6° in favor of the water at the gorge. While this is not a low temperature for potable water, it is pleasant and cool in comparison to the present supply.

It may also be pointed out that the coolest water of the day (taken just before sunrise) would reach the distribution system in Manila at the hottest part of the day—i. e., from 12 m. to 2 p. m.—and the probabilities are that all water in use by Manila consumers would show a temperature of less than 80° F.

Samples of water were carefully taken for the Laboratory, and chemical, bacteriological, physical, and microscopical analyses were made. The results follow herewith.

It will be noticed that chemically the water is acceptable. Free ammonia and chlorine are present but in minute quantities, and as these impurities are the visible indication of sewage pollution it is clear that no danger exists at present. The removal of the town of Boso Boso and creation of a forest reserve (elsewhere referred to) will eliminate these substances. None of the other salts are deleterious.

In the bacteriological examination a singular fact is developed. The sample from the "gorge" shows 3,500 bacteria per cubic centimeter, while that from the present intake shows only 500 per cubic centimeter. No evident explanation exists for this state of affairs, other than that the sample from the "gorge" was drawn from a rapid current, while that from the intake was drawn from a comparatively quiet source. Sedimentation might then have affected the bacteriological result.

In view, therefore, of the necessity of a storage reservoir of large capacity at the point of diversion and that the water for the city will be drawn after complete sedimentation, I believe filtration referred to in the Laboratory report¹ to be unnecessary.

¹Since the above was written the bacteriological report was referred back, with a statement of proposed conditions, and a reference to third indorsement gives confirmation to my above-expressed opinion.

Technical drawing of a circular frame with a grid and a large 'W' shape. The drawing includes dimensions and a legend.

Legend:

- COMPUTE
- FRAME
- COVER

SECTION OF COVER.

20"

21 $\frac{3}{4}$ "

22"

22"

20"

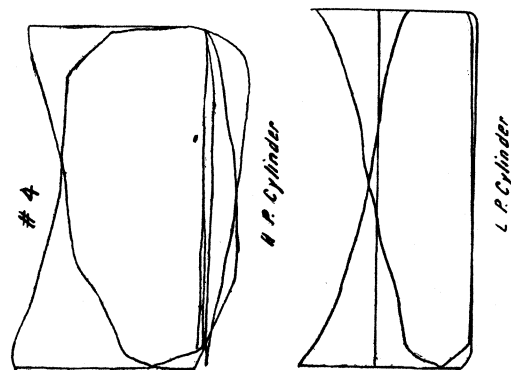
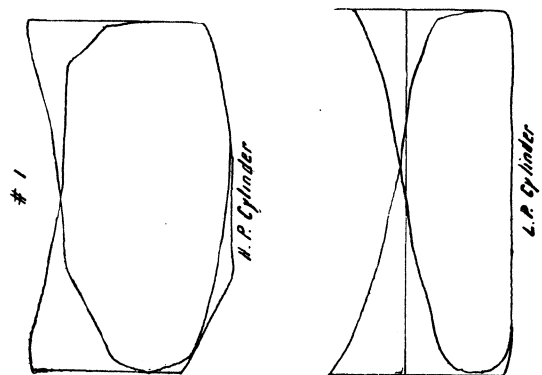
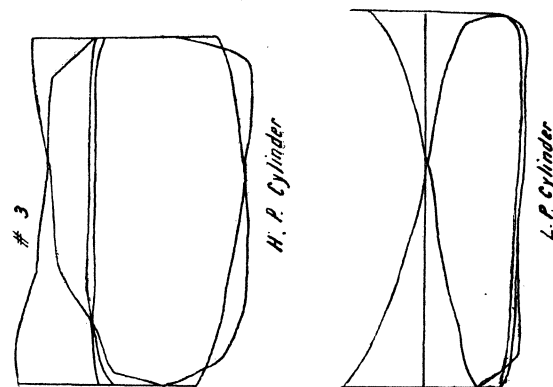
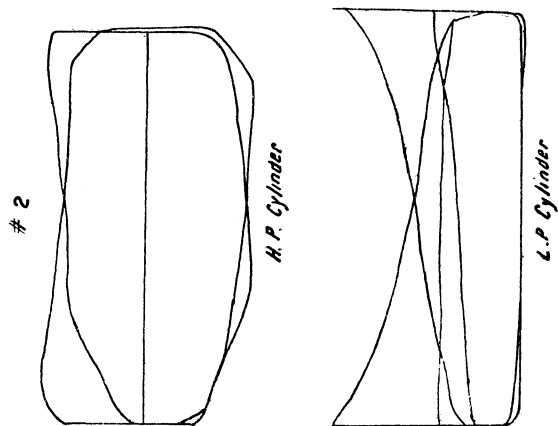
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22"

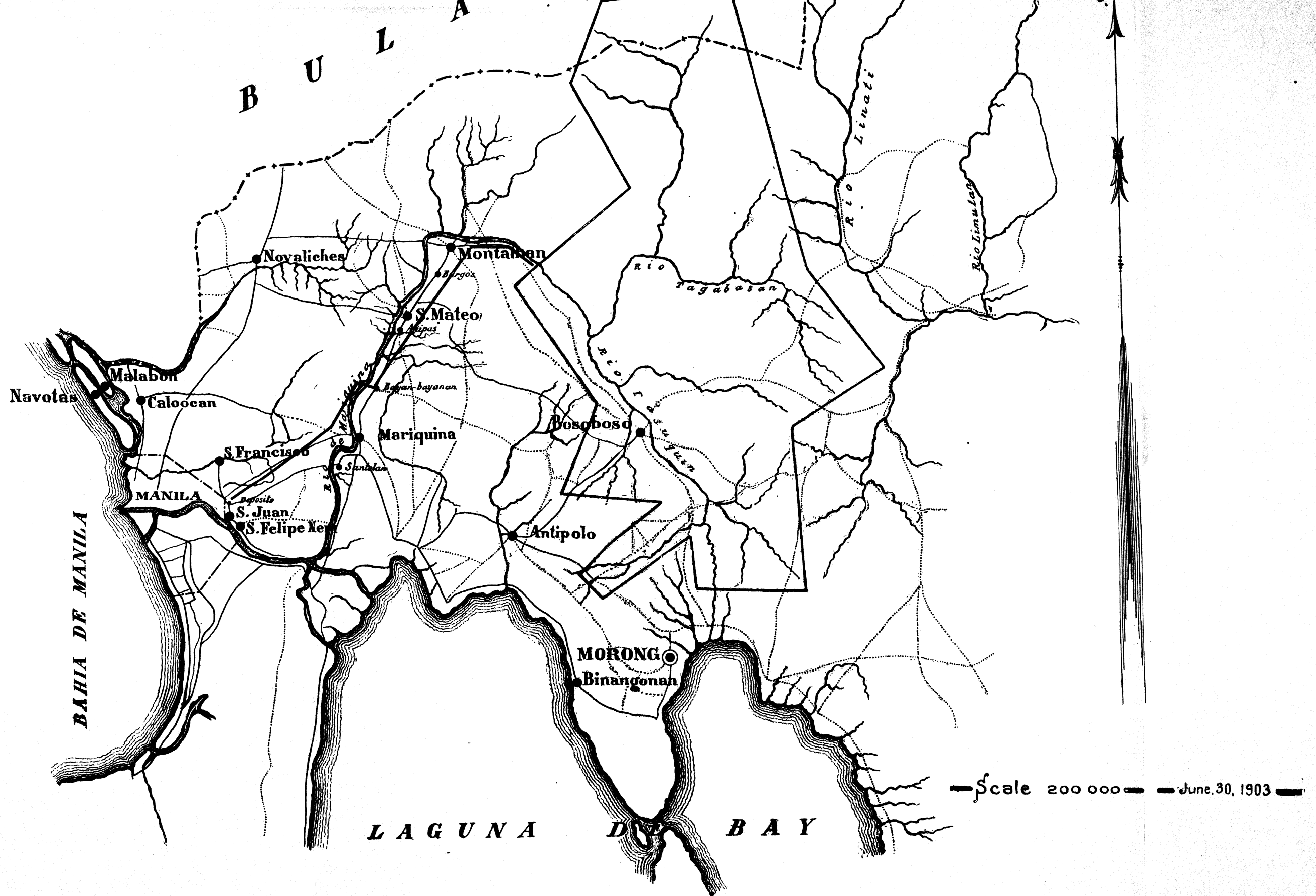
30"

OFFICE CITY ENGINEER
Manila, P. I
Date. Sept. 3, 1902
Class M No. 62
D'tn. Tracer M. 52
~~Transitman from Blue Print~~
Engineer Robert J. Smith

INDICATOR DIAGRAMS FROM HIGH AND LOW PRESSURE CYLINDER
OF PUMPING ENGINES 1-2-3-4
SANTOLAN PUMPING STATION



CITY ENGINEER	
Dept. of Engineering and Public Works	
MANILA	
Date	Book
Class	Sheet
Office	Tracer
Surveyor	
Engineer	



NOTE - Location of Water Pipe shown —
Limits of Water Shed shown — — —

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 341

LECTURE 1

LECTURE 2

LECTURE 3

LECTURE 4

LECTURE 5

LECTURE 6

LECTURE 7

LECTURE 8

LECTURE 9

Recapitulating, therefore, the results of the preceding discussion, the bases of the investigations concerning new works of collection, conduction, and distribution are:

(1) A supply of at least 21,500,000 gallons per day, which shall be susceptible of enlargement.

(2) A storage capacity sufficient to provide for an extraordinarily dry season at or near the storage basin.

(3) Diversion works at or near the storage basin.

(4) A pipe line of sufficient capacity from the diversion works to the city.

(5) A reservoir system for storage and distribution, in the immediate vicinity of the city.

(6) A distribution system whose mains and ramifications shall reach and supply all portions of the city.

SURVEYS.

The examination of the watershed having proved its adequacy to meet the first of these conditions, it remains to take up the question of storage.

A careful survey has been made of the entire distance from the deposito to a point some 7 miles above the town of Montalbon, and on the map of this survey herewith presented two available storage basins are shown which in this report will be referred to as the upper and lower basins.

The lower basin is about 2 miles above Montalbon, and would be closed by a masonry dam at a point where the valley narrows to less than 500 feet, and is distant 14.1 miles from the deposito.

The elevation of the crest of this dam, necessary for storage and gravity pressure, is 160 feet above mean low water, Manila Bay, which would require a dam 100 feet in extreme height. The length of the dam on the crest would be 450 feet; its contents 43,270 cubic yards of masonry.

The storage area is 250 acres, capacity 2,000,000,000 gallons, of which 1,000,000,000 gallons is above the plane of 150 feet elevation and is effective full-flow storage. Both sides and bottom are in rock and present no unusual engineering features. The pipe line from this dam would be 48 inches in diameter and 14.1 miles in length.

The upper basin is above the gorge, 15.72 miles from Manila, and the retaining dam would be at the upper end of the gorge. The elevation of the crest of the dam would be 210 feet above mean low water, Manila Bay, but the dam would be but 60 feet in extreme height and 375 feet in length on the crest. The pipe line from this point would be 42 inches in diameter. Above the dam the valley widens out and the storage basin is very large. Its area is 311 acres, capacity 2,500,000,000 gallons, of which 1,250,000,000 gallons is above the plane of

195 feet and is effective full-flow storage, while the dam would require 16,000 cubic yards of masonry.

Due to the seamy nature of the limestone rock comprising the two mountains which form the gorge, a considerable amount of stripping and concrete patching of the bottom and wetted sides of the storage basin would be required which will be taken up in the comparative estimates which follow.

The upper basin presents the following advantages: A small dam, 16,000 cubic yards, as compared to 43,270 yards; larger storage basin, 311 acres, as compared to 250 acres; smaller pipe, 42-inch cubic diameter, as compared to 48-inch diameter.

The lower site has the following advantages: Shorter pipe line, 14.1 miles, as compared to 15.72 miles; the distance between them contains the heaviest rock work on the line; impervious foundations on bottom and side slopes for the dam; a larger watershed by about 10 square miles.

From either basin the water would be conducted through a pipe, following the south bank of the Mariquina River to the town of Montalbon, thence traversing the Mariquina Valley to the eastward of San Mateo, it would cross beneath the Mariquina River in the vicinity of Bayan Bayan, a barrio of Mariquina.

Thence, climbing the hills to the west of the river, it would pass through a tunnel to the lower ground east of the deposito and thence to the reservoir system.

Three kinds of pipe are in general use for the conduction of water: (1) Cast iron; (2) wood stave; and (3) riveted steel plates.

Cast iron is economical where the question of transportation is of little importance. For use here in the long pipe line its weight and the cost of transportation make it almost prohibitive, and it must be eliminated from the discussion except for use in the distribution system.

Wooden-stave pipe has of late years come into general use in the United States, and its ease of transport and construction together with its great carrying capacity gives many advantages over pipes of metal.

Its cost is determined by the spacing of the bands which hold it, and in general it may be said to be the cheapest pipe in use with pressure not exceeding 50 pounds per square inch. Above that limit it has about the same cost as steel-riveted pipe, while above a pressure of 75 pounds it can not be used, as in a large pipe under such pressure the bands crush the fibers of the staves and leakage ensues.

Though the pressure in the proposed new pipe line is not excessive, I should not feel justified in advocating wooden-stave pipe unless under the bonded guaranty of a responsible contractor.

The objections to the pipe are, first, the ease with which it can be wrecked or damaged by irresponsible or malicious persons and its uncertain life under tropical conditions.

Steel-riveted pipe seems to be the best pipe for the present purposes. It is comparatively light, has certain strength and fair carrying capacity. It is easily laid, and its life is ample for the purpose. The plates should be purchased and shipped to Manila flat and of exact size, thus insuring a cheap freight rate. In Manila preferably by contract they should be bent, riveted, made into five or six course lengths, and dipped in a hot asphalt bath. From Manila they should be hauled to the trench in the field, leaving only one round lap to be single-riveted in the field. Pipe of this class is too well known and uniformly successful to need further discussion.

On account of the liability of a long pipe line to temporary interruptions of service, it will be necessary to provide a reasonable storage capacity within the immediate vicinity of the city. A three day's supply is generally considered ample for this purpose, and it is proposed to provide for this amount of distribution storage, first, by the enlargement of the present deposito, and second, by the construction at some future date of an additional reservoir on the higher ground to the eastward.

The capacity of the present deposito is about 16,000,000 gallons and the elevation of the flow line 78 feet. By cutting out the roof and pillars and building retaining walls of the excavated materials it will be easy to raise the level of the water to approximately 100 feet elevation, increasing the storage capacity to nearly 70,000,000 gallons and giving an additional static pressure of nearly 10 pounds on the present distribution system. An additional reservoir partially in excavation on the higher ground east of the deposito, with a capacity of approximately 25,000,000 gallons, will be sufficient for the system, and its construction may be deferred until its necessity becomes apparent.

In these estimates it is proposed to make these reservoirs open to the sky, but if found desirable they can be roofed in with light materials at small expense.

No plans or estimates of the necessary extensions to the present distribution system has as yet been prepared. The subject will however be immediately taken up.

The plan therefore proposed for an increased water supply for the city of Manila comprises:

- (1) The construction of a dam and storage reservoir at or near the gorge above Montalbon, together with the necessary diversion works and controlling devices.

- (2) About 15 miles of 42-inch steel-riveted pipe, laid in trench and tunnel.

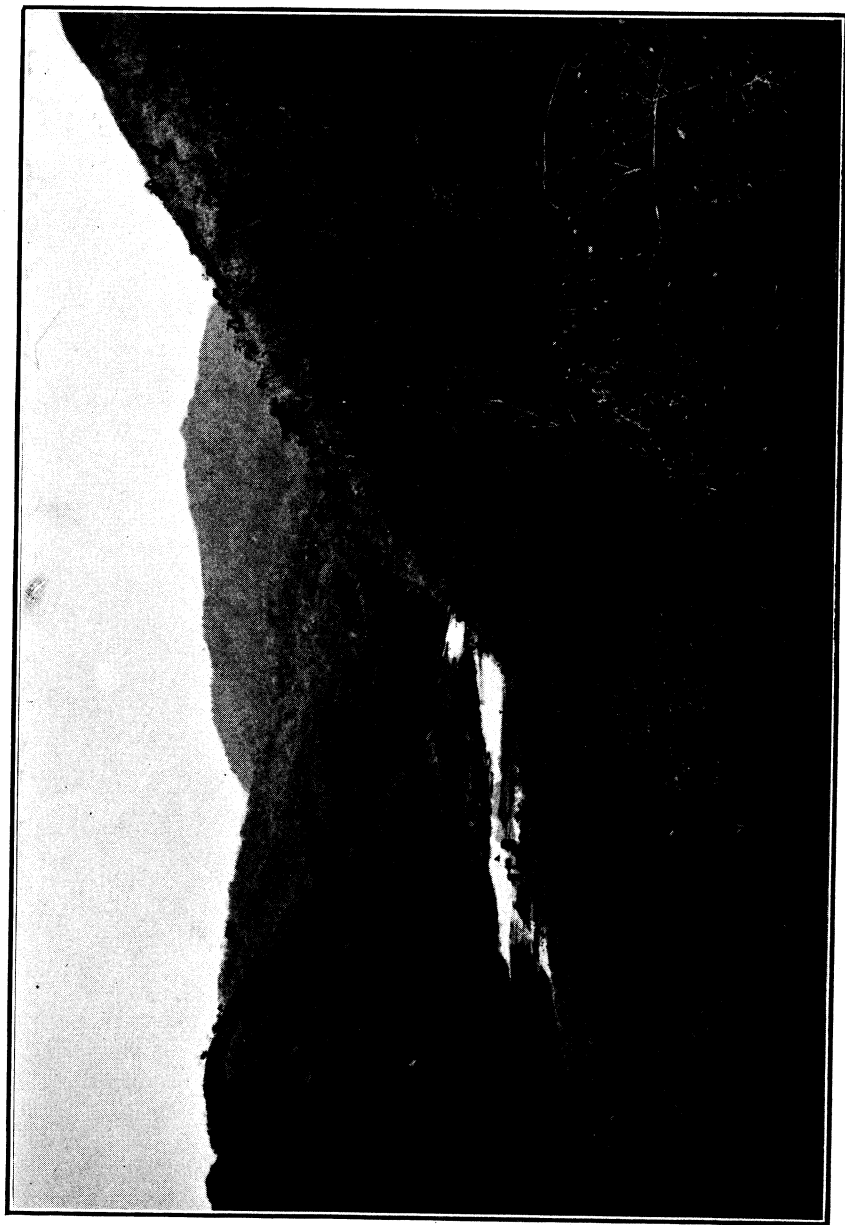
- (3) The immediate enlargement of the existing deposito and the construction later of a new reservoir.

- (4) The extension of the present distribution system to meet all requirements.

The estimates of cost of such a system as herein outlined are as follows:

Estimate for upper dam site.

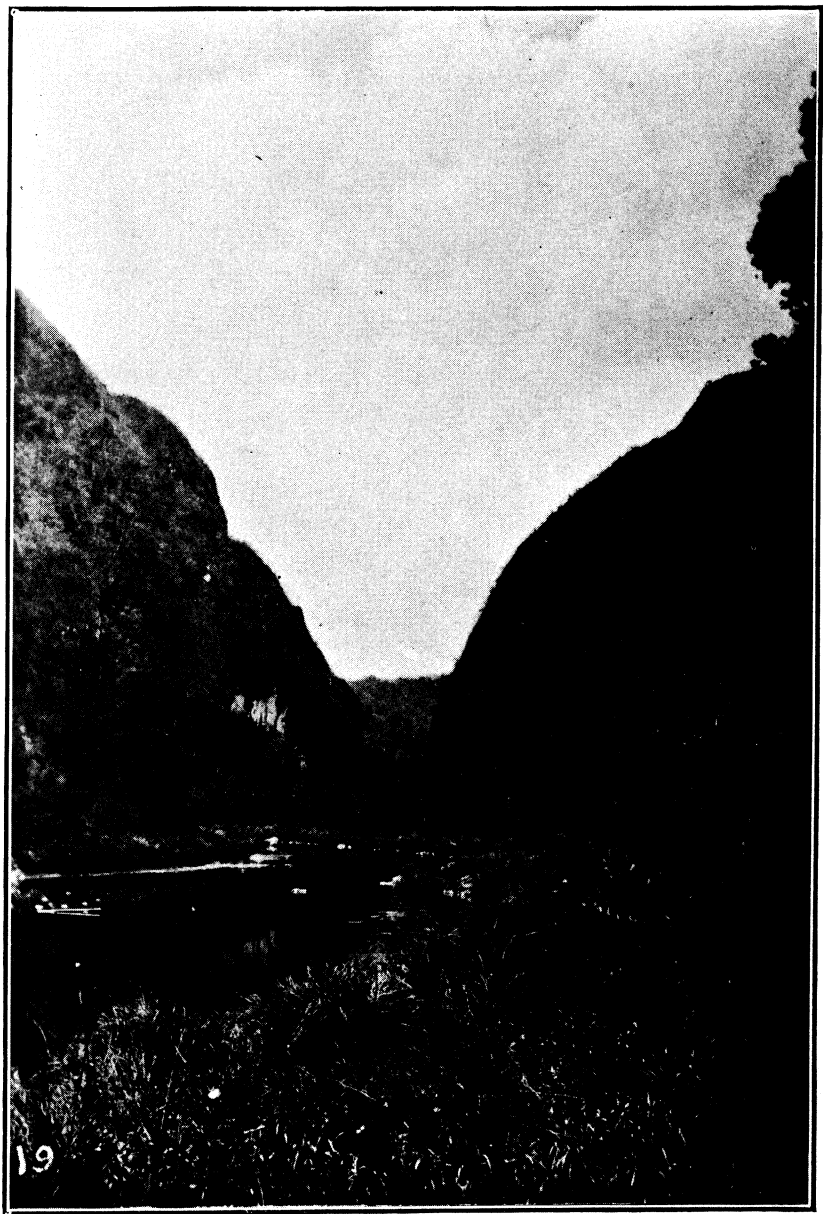
15.7 miles of road, deposito to dam, at \$2,000.....		\$31,400
Upper storage reservoir:		
Clearing and grubbing 311 acres, at \$100.....	\$31,100	
Stripping soil and covering with gravel, 60,000 cubic yards, at 30 cents.....	18,000	
Lining near dam and stopping crevices in rock over area of 720,000 square feet, 13,000 cubic yards concrete, at \$10	130,000	
	<hr/>	179,100
Dam:		
Excavating 4,500 cubic yards rock, at \$2.....	9,000	
16,000 cubic yards concrete, at \$10.....	160,000	
Gate chamber and fittings, including sluices, screens, gates, etc	15,000	
	<hr/>	184,000
Pipe line:		
14.3 miles steel-riveted pipe, 42-inch diameter, No. 6		
B. W. G., 7,100,000 pounds, at 5 cents laid.....	355,000	
217,000 pounds rivets, at 5 cents.....	10,850	
	<hr/>	365,850
Trench:		
85,000 cubic yards earth excavation, at 30 cents.....	25,500	
28,000 cubic yards dhobie rock, at \$1.25.....	35,000	
11,000 cubic yards lime rock, at \$2.....	22,000	
	<hr/>	82,500
Reservoir:		
Excavating 210,000 cubic yards dhobie rock, at \$1.....	210,000	
Embankment, 20,000 cubic yards, at 50 cents.....	10,000	
Concrete lining, 2,000 cubic yards, at \$10.....	20,000	
Asphalt coating, 40,000 square yards, at 10 cents.....	4,000	
Gate house and fittings.....	20,000	
	<hr/>	264,000
Tunnel:		
6,000 linear feet, at \$12.....		72,000
14 air valves, 17 blow-offs, 34 manholes, 2 standpipes.....	11,800	
200,000 brickwork, at \$30 per 1,000.....	6,000	
Iron trestles, 40,000 pounds, at 5 cents.....	2,000	
Engineering and superintendence.....	40,000	
	<hr/>	59,800
	<hr/>	
Total		1,238,600
10 per cent for contingencies.....		123,860
	<hr/>	
Total for system from upper dam site.....		1,362,460



MARIQUINA RIVER.

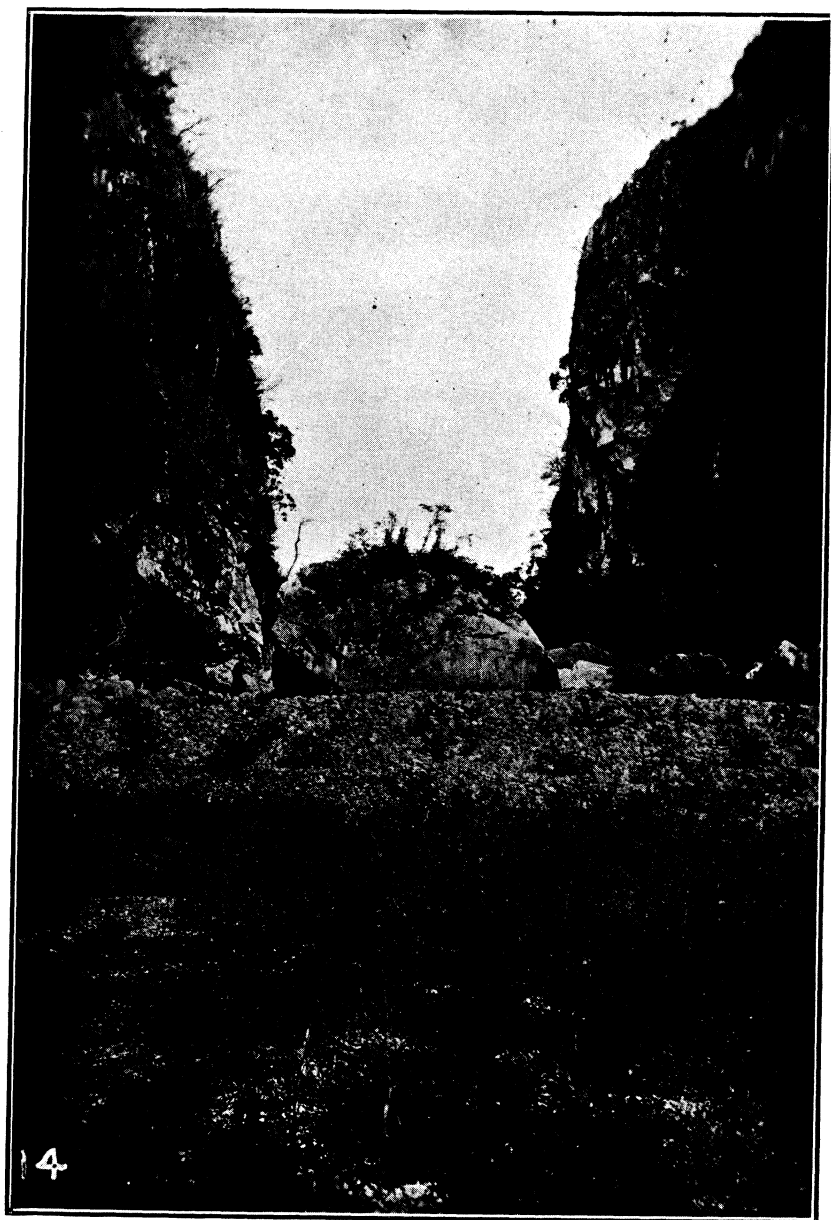


MARIQUINA RIVER JUST BELOW GORGE.



THE GORGE, LOOKING UPSTREAM.





THE GORGE, LOOKING DOWNSTREAM, SHOWING THE SITE OF THE PROPOSED DAM.



Estimate for lower dam site.

14.1 miles of road, at \$2,000.....		\$28,200
Lower storage reservoir:		
Clearing and grubbing 250 acres soil, at \$100.....	\$25,000	
Stripping soil, etc., 60,000 cubic yards, at 30 cents.....	18,000	
Concrete patching over 100,000 square feet, 37,000 cubic yards, at \$10.....	37,000	
		80,000
Dam:		
Excavation, 5,500 cubic yards rock, at \$2.....	11,000	
43,270 cubic yards concrete, at \$10.....	432,700	
Gate chamber and fittings.....	15,000	
		458,700
Pipe line:		
12.8 miles 48-inch steel-riveted pipe, No. 6, 7,565,000 pounds, at 5 cents.....	378,250	
211,000 pounds rivets, at 5 cents.....	10,550	
		388,800
Trench:		
92,500 cubic yards earth, at 30 cents.....	27,750	
30,000 cubic yards dhobie rock, at \$1.25.....	37,500	
		65,250
Reservoir (as before).....		264,000
Tunnel:		
7,000 linear feet, at \$12.....	84,000	
Air valves, blow-offs, standpipes, etc.....	12,000	
225,000 brickwork at \$20 per 1,000.....	6,750	
Iron trestles, 40,000 pounds, at 5 cents.....	2,000	
Engineering and superintendence.....	40,000	
		144,750
Total		1,364,450
10 per cent for contingencies.....		136,445
Total for system from lower dam site.....		1,500,895

No estimate has here been made for right of way through private lands nor for the purchase of property rights within the watershed area. This office has no data as to the extent or value of private landholdings along the proposed lines. The question should be taken up by the legal department of the city through a land agent.

No estimate has been made of the cost of an additional pumping plant for comparison with a gravity system. This would require the necessary pumps and buildings, dam and intake, and about 4 miles of new force main, and in addition the establishment of an extensive filter plant.

Mr. Dieck has kindly furnished me with an estimate of the cost of operation of a pumping plant of 20,000,000 gallons daily capacity. His estimate is \$60,000 per annum, almost entirely made up of items not found in a gravity system. On the basis of an excess of \$50,000 for

operating expenses against the pumping plant, capitalized at 5 per cent, \$1,000,000 more may be spent on a gravity system than for a pumping station.

Excluding the cost of the reservoir (necessary in either case from the above estimates of a gravity system), the cost for the upper dam site is \$1,072,000 and for the lower dam site \$1,210,000, leaving in the first instance \$72,000 and in the second \$210,000 as the economical surplus available for installing new pumps, force main, and filter beds. As these sums are plainly insufficient, the economy of the gravity system is clear.

As to the time necessary for the installation: The preparation of detail plans, specifications, and forms for proposals can be completed within three months; advertising, four months; preparations of contractor, two months; actual construction, two years—a total of two years ten months, or, say, June 30, 1906, for the completion of the entire system.

I therefore offer the following recommendations:

(1) The authorization of a gravity system of waterworks, taking the supply from the Mariquina River above Montalbon, on the general lines outlined herein.

(2) The necessary legislation for creating a forest reserve within the following described limits: Beginning on the summit of Mount Cayabasan, on the northern boundary line of Rizal Province, and running in a southerly direction along the summit of the range of mountains to a point on the summit of the mountains about 5 miles northeast of the town of Varas; thence westerly along the summit or ridge to a point half way between Antipolo to Boso Boso where the trail crosses said ridge; thence northerly along said ridge or summit to Mount Bantay, where the northern boundary line of Rizal Province crosses Mount Bantay; thence easterly along said northern boundary line of Rizal Province to place of beginning, containing 100 square miles more or less. Private property within these limits should be purchased

(3) The purchase of rights of way through private property along the line of the proposed pipe line.

(4) The immediate construction of a wagon road along the proposed line, which I believe should be done by day labor under foremen instead of by contract.

(5) The letting of contracts and the construction of the entire system with the greatest possible dispatch.

(6) In a project of so much importance I would also suggest the advisability of engaging a consulting engineer of recognized standing and ability to pass on the proposed plans.

While there are no serious questions involved, there are many points on which the best engineering experience available can be profitably engaged.

With this report, and forming a part thereof, are the following: Map of the city of Manila showing fire limits; map of the watershed, Mariquina River; Laboratory report on water supply; photographs of the reservoir, pipe line, river, gorge, and watershed.

Respectfully submitted.

J. F. CASE,

Engineer Increase Water Supply.

SUPPLEMENTARY.

The question of the riparian rights of landowners and municipalities along the banks of the stream below the proposed diversion works is of importance and should be referred to the legal department for an opinion.

My own reading of the Spanish laws governing the waters of the Archipelago leads me to the conclusion that the waters of the stream in question may be diverted for public use, though an action for proved damages will lie.

I propose, however, to meet the question by an excess of storage capacity, and the release during the dry season of a quantity sufficient for the needs of the valley.

My estimate is that 2,000,000 gallons per day, with the flow from the Nanca, Ampit, and Mango rivers and numerous lesser streams will suffice for the needs of the valley. This amount can be increased at small expense by increasing the height of the proposed dam and consequent storage, or the waters may be conserved and the towns of the valley supplied through a small auxiliary pipe.

I would therefore request a legal opinion—

First. As to the right to divert the waters of the Mariquina River as herein outlined.

Second. As to the percentage of the total stream flow which can be diverted.

J. F. CASE,

Engineer Increase Water Supply.

LABORATORY REPORT ON WATER SAMPLES SUBMITTED.

DEPARTMENT OF THE INTERIOR,
BUREAU OF GOVERNMENT LABORATORIES,

Manila, P. I., June 18, 1903.

SIR: I have the honor to present the following report on the bacteriological examination of the samples of water submitted on May 18, 1903, by the city of Manila:

The water was collected on May 17 in sterile bottles and kept on ice until May 19. The sample of water marked "from the gorge 3 miles above Montalbon" contained about 3,500 bacteria per cubic centimeter; that from "the intake at

the pumping station" about 500 bacteria per cubic centimeter. Both samples contained about an equal and considerable amount of flocculent organic matter.

In order roughly to determine the presence or absence of *B. coli*, dextrose fermentation tubes were inoculated with from one-fourth to three cubic centimeters of water from each sample. The total gas production varied from 40 to 90 per cent with a final ratio, in each instance, of $H:CO_2=1:2$, thus probably excluding the presence of the common varieties of *B. coli*, which gave a ratio of $H:CO_2=2:1$.

Litmus lactose agar plates were prepared, using one-fourth, one-half, and 1 cubic centimeter of water from each sample. A number of organisms were then worked out culturally in a search for members of the colon-typhoid group of bacilli. In both samples of water a number of organisms was obtained, which, although atypical, in many respects resembled *B. coli*. Other organisms, resembling *B. hog cholera* and *B. dysenteriae* in some respects, were finally classed as "saprophytes" on account of atypical reactions, such as the production of pigment, fluorescence, etc.

Sterile peptone solution was added to 100 cubic centimeters of each of the samples and after two and four days of incubation they were examined for amœbæ and other protozoa. No protozoa grew in either sample, but the pellicle which grew upon the surface of each contained many actively motile curved rods. Gelatin plates from these pellicle growths gave a few colonies resembling those of the cholera bacillus. Pure cultures, however, failed to give the cholera-red reaction, and their nonidentity with the cholera bacillus was probably shown by the fact that they failed to agglutinate with anticholera rabbit serum at a dilution of 1:40 in five hours, whereas known cholera organisms agglutinated at a dilution of 1:200 in thirty minutes.

It seems rather strange that the water from the gorge should contain so many more organisms per cubic centimeter than that at the present intake, but this may be due to local conditions unknown to the laboratory or a failure to keep the sample cool throughout the period of transportation.

Notwithstanding the apparently harmless character of most of the organisms found in the water from the gorge, the large amount of organic matter present would seem to indicate the necessity of some plan for its filtration.

Very respectfully,

WM. B. WHERRY, *Pathologist.*

The SUPERINTENDENT OF GOVERNMENT LABORATORIES,

Manila, P. I.

[First indorsement.]

BUREAU OF GOVERNMENT LABORATORIES,

OFFICE OF THE SUPERINTENDENT,

Manila, P. I., June 25, 1903.

Respectfully forwarded to the Department of Engineering and Public Works, city of Manila, for the information of Major Case, engineer at the waterworks.

PAUL C. FREER,

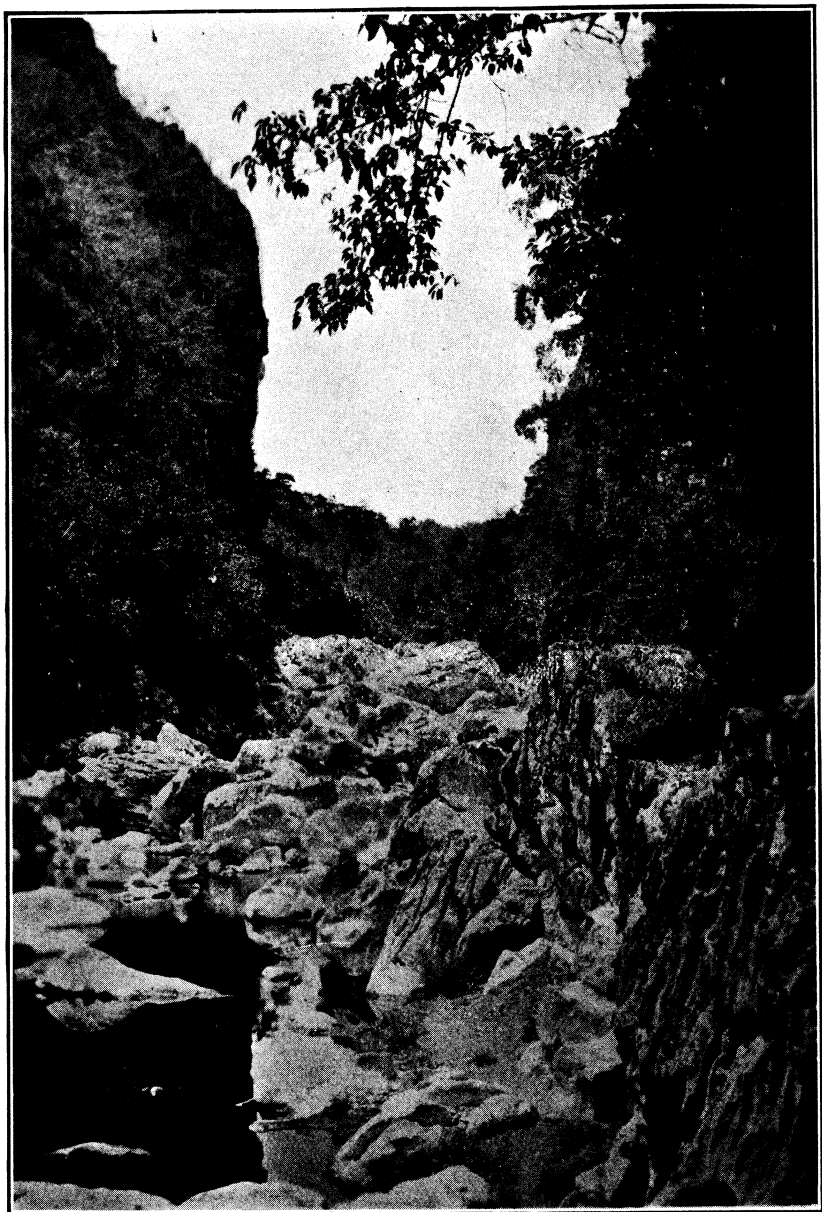
Superintendent Government Laboratories.

[Second indorsement.]

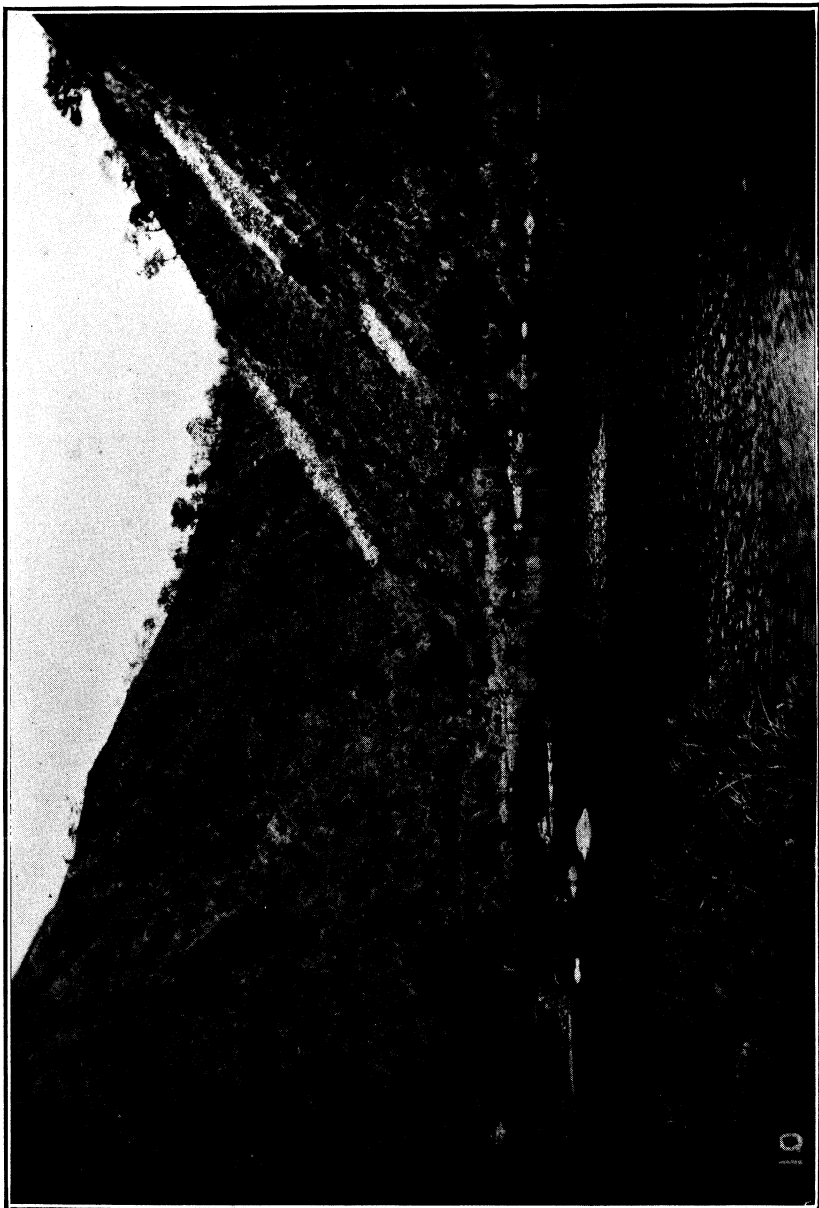
MANILA, P. I., *June 27, 1903.*

Respectfully returned to the Superintendent of Government Laboratories, with a request for an additional opinion.

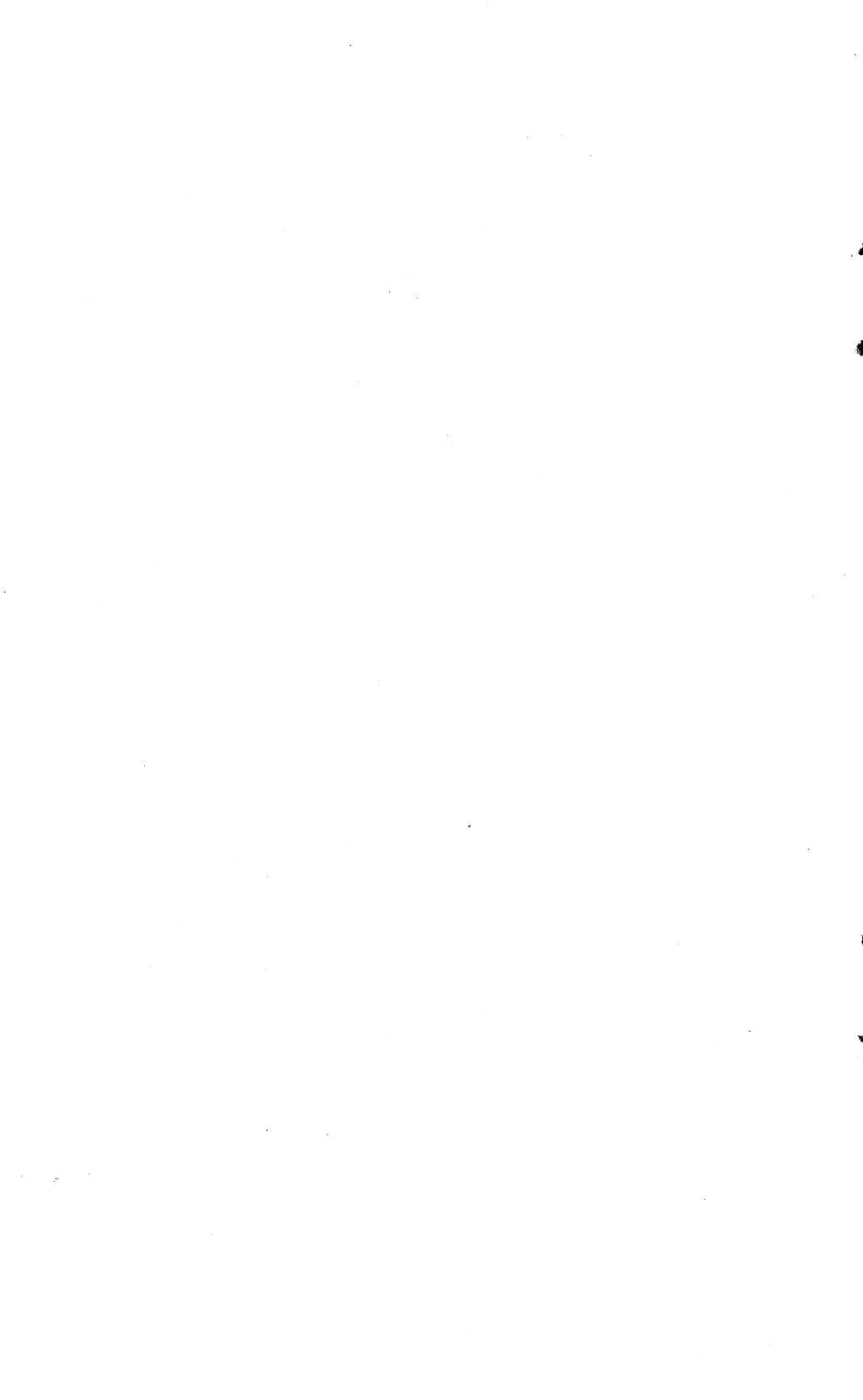
The water for the new system will be drawn from a storage reservoir of more than a billion gallons capacity, which will be supplied from a reserved watershed.



LOOKING UP THROUGH THE GORGE.

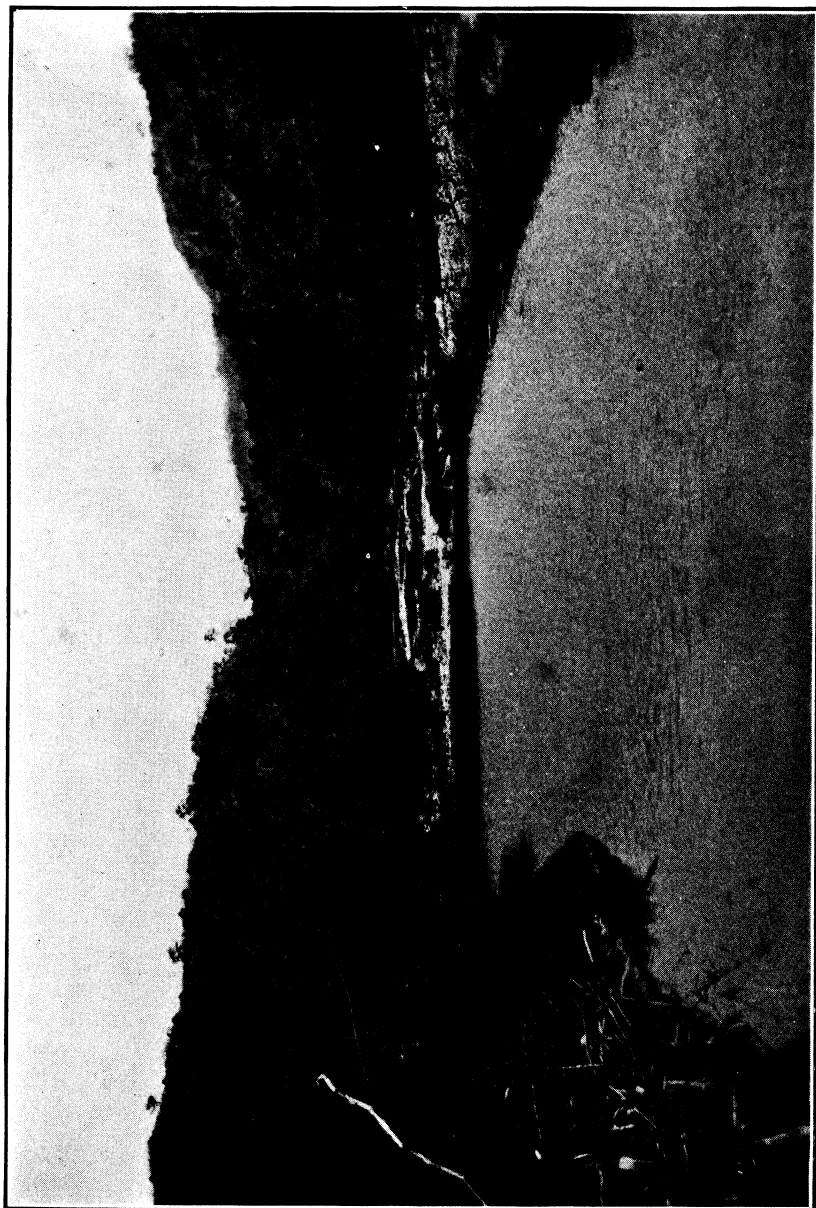


LOWER DAM SITE.



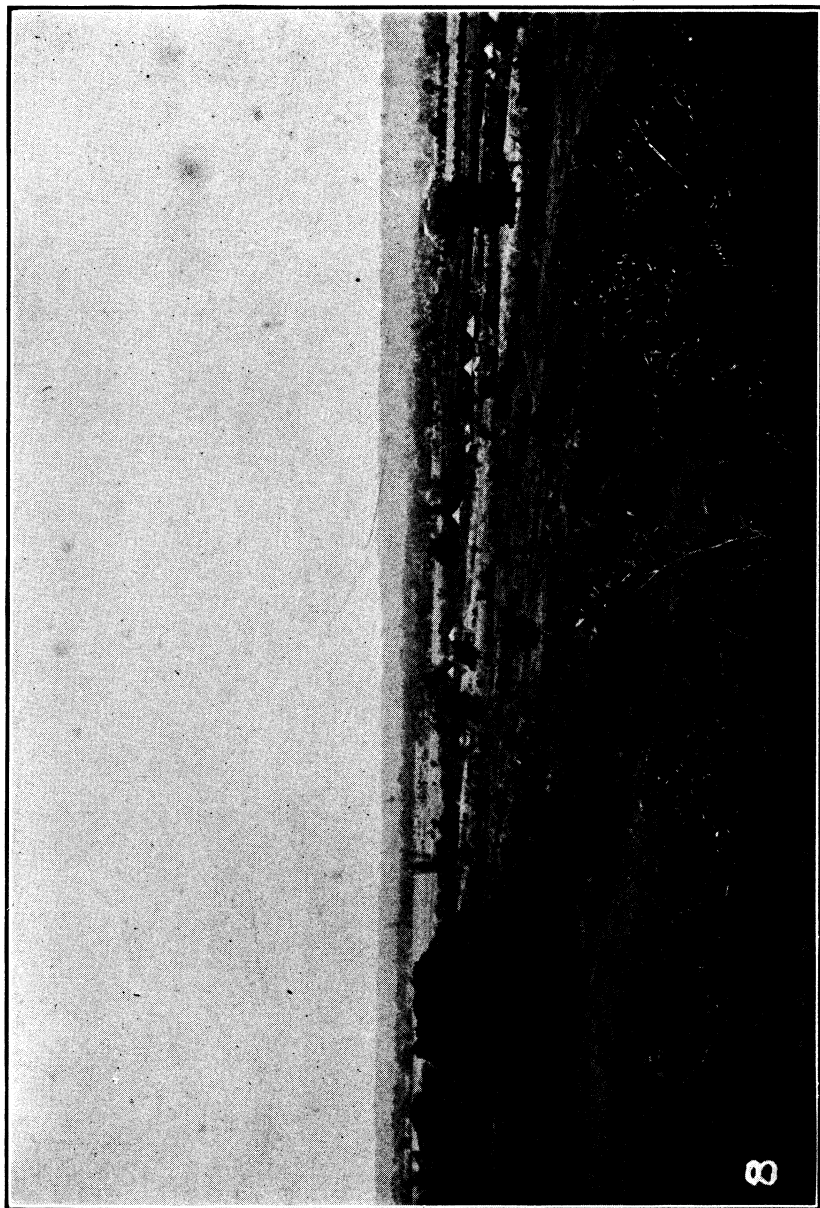


LOWER DAM SITE, LOOKING UPSTREAM.



FROM LOWER DAM SITE, LOOKING DOWNSTREAM.





8

MARIQUINA VALLEY, ALONG PIPE LINE NEAR MONTALBAN.

Will not the purification due to the perfect sedimentation obviate the necessity of the filtration mentioned in the within report of Mr. Wherry?

J. F. CASE, *Engineer Water System.*

[Third indorsement.]

BUREAU OF GOVERNMENT LABORATORIES,
OFFICE OF THE SUPERINTENDENT,
Manila, P. I., June 30, 1903.

Respectfully referred to Maj. J. F. Case, engineer in charge of the water system, Department of Engineering and Public Works, city of Manila.

In view of the size of the storage reservoir and the fact that it will be supplied from a reserved watershed, I believe purification due to perfect sedimentation will obviate the necessity of filtration referred to in the within report. However, regular and consistent analyses of the reservoir water at the outlet should be made after such reservoir is established.

PAUL C. FREER,
Superintendent Government Laboratories.

REPORT ON ANALYSIS OF BUREAU OF GOVERNMENT LABORATORIES.

[Laboratory No. 1234. Date submitted, June 4, 1903; date reported, June 23, 1903. Sample of water from Mariquina Valley, submitted by Department of Engineering and Public Works, city of Manila. Figures given show parts per million.]

Appearance, slight sediment; odor, none; reaction, neutral.

Total residue	179.8
Fixed residue	159.3
Loss on ignition.....	40.5
Appearance on ignition: Blackened; presence of organic matter in small amount.	
Ammonia (free)	0.15
Nitrates, as No. 3.....	8.00
Nitrites	None.
Fe ₂ O ₃	2.0
Al ₂ O ₃	6.8
CaO	41.8
SiO ₂	34.2
MgO	5.4
Cl	10.8
SO ₃	8.2
Na ₂ CO ₃	17.0
K ₂ O	Trace.
CO ₂	Small amount.

The water, from a chemical point of view, is potable.

REPORT OF CITY ENGINEER.

MANILA, P. I., *August 10, 1903.*

SIRS: I have the honor to submit the following summary of work performed by the Department of Engineering and Public Works for the fiscal year ended June 30, 1903.

The work of this department was in charge of Capt. R. E. McGregor, Corps of Engineers, United States Army, as City Engineer, from July 1 to December 26, 1902; in charge of Mr. R. G. Dieck from December 28, 1902, to January 1, 1903; and in charge of Mr. O. L. Ingalls since that date.

The work of the Engineering Department of the city of Manila is subdivided into the following heads:

Street Construction and Bridges, Mr. L. P. Patstone; Street Cleaning and Parks, Mr. J. C. Mehan; Water Supply and Sewers, Mr. R. G. Dieck; Buildings and Illumination, Mr. L. A. Dorrington; and Inspection of Private Buildings, Mr. R. M. Loper.

STREET CONSTRUCTION AND BRIDGES.

[Mr. C. H. Farnham, superintendent in charge until November 30, 1902; Mr. J. C. Mehan, superintendent Street Cleaning and Parks, acting superintendent until March 30, 1903, and Mr. L. F. Patstone, superintendent since that date.]

For the purpose of facilitating the work the city has been redivided into four districts, as follows: (1) Intramuros, Ermita, and Paco west of Paco Estero; (2) San Nicolas, Tondo, and Binondo; (3) Santa Cruz, Quiapo, Sampolac, and San Miguel; (4) Paco east of Paco Estero, Malate, Santa Ana, and Pandacan.

The pavement of the city consists of granite blocks, wood block, and macadam, and is divided as follows:

	Square meters.
Granite blocks	50,695
Wood block	3,969
Macadam	1,274,894

The following work has been performed during the year:

A new street has been extended through the Botanical Gardens from Calle Arroceros to the Bagumbayan Drive, curbing set, granolithic sidewalk built, and roadway macadamized.

Government Printing Plant.—Driveways have been graded and macadamized.

Plaza Lawton.—Curb reset and roadway graded.

Bridge of Spain.—Concrete foundation introduced and wooden-block pavement laid.

Calle Valderama.—A retaining wall has been constructed here for the purpose of reclaiming land to be used in connection with the tenement houses recently erected by the city. The wall was built from stones taken from the dismantled Santo Domingo gate, and sand for filling was taken from the beach.

Calle Padre Faura.—Curbing has been set, cement sidewalks laid, and tubes for drainage have been put in in front of the Exposition grounds.

Calle Concepcion.—This street, from San Marcelino to Marques de Comillas, runs through very marshy ground, and the work of bringing it to grade is still in progress.

Calles Panaderos and Laymayan, Santa Ana.—This road starts at the church and from there runs to the Pasig River, thence along the Pasig River in the form of a loop back to the point of beginning, a distance of 1,382 meters. Starting opposite the church and going toward the Las Damas Bridge, a double roadway 307 meters in length has been constructed, forming a parking space in the center. After the roadway had been brought to proper subgrade telfording was introduced and all necessary stone obtained from the city quarry on the lake.

The total area of roadway improved has been 13,000 square meters. Five hundred and thirty-six lineal meters of cement curb have been set, 5 culverts have been built, and 591 meters of pipe laid to provide proper drainage.

There will be much traffic over this road in the future, as it is one of the main points of embarkation of people going up the Pasig River in bancas. This road will also be a great relief to the residents in this section, for the reason that during the last rainy season the road was impassable.

Wall along Calle Tetuan from Gandara to Obando.—This street runs along San Jacinto Estero and is the main thoroughfare to the water front. During the rainy season this street has usually been covered with from two to three feet of water, which will be obviated when this wall is finished and the street raised to the proper grade. Stone for this work has been taken from the dismantled city wall.

The following streets have been resurfaced:

Streets.	Between what points.	Square meters.
San Fernando	Madrid to Blanco Bridge	852.5
Bagumbayan	Botanical Gardens to Luneta	18,340.8
Fraternidad	Jesus to Gaingin	2,050
Peñafrancia	Pandacan to bridge	2,800
Real	San Luis to Herran	2,631.5
Baluarte	San Francisco to Victoria	404
Total		26,808.8

Santo Domingo gate.—The work of remodeling this gate has been completed. Two 60-centimeter pipes have been laid to take care of the drainage from the moat to the Pasig River. The wooden bridge crossing the moat has been removed and replaced by earth fill with stone retaining walls.

City walls.—The demolition of the city wall was begun in March of the present year and is still in progress.

The portion being demolished lies between the Aduana and Almacen gates. The stone is being used for building the approach to the Palomar crematory, Tetuan wall repairs to bridges, etc.

On May 28, 1903, thirty convicts from Bilibid were put to work tearing down the wall, and have been so employed from the above date. The warden of Bilibid furnished the transportation necessary in removing the stones required by him. This department furnished the labor for loading the carts.

Summary of work performed during the year.

Streets repaired	square meters.....	333,253
Curbs set	linear meters.....	959
Pipes laid:		
60-centimeter	do.....	223
40-centimeter	do.....	109
30-centimeter	do.....	729
20-centimeter	do.....	76
15-centimeter	do.....	57
Gutters, 40-centimeter	do.....	254
Road material used:		
Broken stone	cubic meters.....	22,860
Gravel	do.....	4,522
Average daily transportation:		
Wagons		14
Carts		4
Bull carts		28

The average number employed in street construction during the year has been 356.

Bridges.—There are 55 bridges and 17 culverts in the city, all of which are under constant inspection and care of this department. New floors are being put in the wooden bridges as fast as possible, as most of them have become badly decayed and are dangerous to traffic. The arches of the masonry bridges are being repaired and put in good condition. A force of painters is engaged in cleaning the iron work of the bridges and giving them a coat of graphite paint. The average force of 80 men has been employed in the repair of bridges.

Quarry.—The "Gates" crusher has been installed, together with the two smaller crushers, which are able to turn out sufficient crushed rock to keep both launches hauling steadily. The amount of crushed rock delivered at various point in Manila during the year has been 22,860

cubic meters. When the storage bins are finished and the new scows built it will be possible to handle the stone to better advantage. The average number of men employed at the quarry during the year has been 97.

STREET CLEANING AND PARKS.

[Mr. J. C. Mehan, superintendent in charge.]

The work of this department will be treated under the following heads: Street cleaning; street sprinkling; city parks; city stables; water transportation; collection of refuse; city crematories; and city cemeteries.

Street cleaning.—Since July, 1902, the work of street cleaning has made great progress in the efficiency of the work performed and discipline of the forces.

The city at present is divided into seven districts under the charge of one American as chief inspector, assisted by one Filipino inspector for each district. Each district is subdivided into smaller districts which are presided over by Filipino foremen, who are held responsible for the condition of their respective subdivisions.

The chief inspector visits the seven districts daily, meets each district inspector, and notes the number of men employed and the condition of the district. The district inspector visits each subdivision of his district four times a day and signs the foreman's trimonthly report, as follows: The time of day the visit is made, the number of men employed, and the location of the gang. The foreman signs the inspector's semidaily report showing the time of day the inspector was there, and reports any infraction of the city ordinance which may have occurred in his subdivision. It is also the duty of each foreman to report all water mains in bad condition, all trees that may need attention, and the general condition of the street's surface, in order that the repair gangs may be informed and the needed repairs promptly made.

All men are instructed to be polite, courteous, and to attend strictly to their duties and appear on the work at 6 a. m. and remain until 11 a. m., to return promptly at 2 p. m. and to remain until 5 p. m. Sundays the hours are from 6 a. m. until 11 a. m., for which time the men receive pay for a full day's work.

Any employee found guilty of a violation of any of the rules of this office is, for the first offense, suspended five days; for the second, ten days; for the third, fifteen days; and for the fourth, discharged. All complaints are investigated by the superintendent and evidence from both sides admitted. All promotions are made from the rank and file, which seems to give general satisfaction and is also an inducement for the faithful performance of duties assigned.

Handcarts, for street cleaning, have been introduced and have in a measure increased the efficiency to a higher standard. All employees seemed to be imbued with a spirit of self-advancement and no difficulty has been experienced with them as a whole.

A branch of the service which is worthy of comment is the patrol gang, which visits all esteros, patrols the beaches, and walks the banks of the Pasig in search of dead animals and any other offensive matter that may be found. If animals or offensive matter are found a cart is called promptly to remove the same to the crematory. In fact nothing is left undone to make this branch of the service a success.

All principal streets in the city are cleaned twice, three, and four times daily.

Organization of the forces employed, rate of pay per month and per day, and the superficial street area of the city of Manila, by districts.

Class of labor.	District.								Dumping board. ¹	Night work. ²	Cleaning gutters.	Total.	Rate.	
	City.	1.	2.	3.	4.	5.	6.	7.					Per month. ³	Per day. ⁴
Inspector	1											1	\$116.67	
First-class foreman	1											1	50.00	
Second-class foreman		1	1	1	1	1	1					6	35.00	
Third-class foreman		4	4	2	4	4	4	1	2	1	1	27		\$1.20
All laborer		1							15	3		19		1.00
First-class laborer	12	10	3	10	9	14			15	9		82		.80
Second-class laborer		21	22	6	19	13	30	5		28	6	150		.70
Third-class laborer		45	51	17	32	30	54	10			11	250		.60
Total	2	83	89	29	66	57	103	16	32	41	18	536		

¹At Maestranza.

²On Escolta, Rosario, Plaza Santa Cruz, Goiti, Binondo, and Calle San Sebastian.

³United States currency.

⁴Mexican currency.

Superficial street area of Manila.

District:	Square meters.
No. 1	239,943
No. 2	298,776
No. 3	122,362
No. 4	187,403
No. 5	178,663
No. 6	218,776
No. 7	79,668
Total	1,325,589

The following table shows the number of square meters cleaned daily, much of which is very heavy work owing to bad gutters, which necessitates the use of hoes or shovels instead of brooms:

District.	Cleaned.			Total area cleaned daily.
	Twice a day.	Three times a day.	Four times a day.	
No. 1	210,298	205,896	264,648	680,842
No. 2	289,042	462,765		751,807
No. 3	208,808	53,874		262,682
No. 4	353,046	32,640		385,686
No. 5	346,210	16,674		362,884
No. 6	437,552			437,552
No. 7	159,332			159,332
Total	2,004,288	771,849	264,648	3,040,785

The cost of street cleaning in the city of Washington, D. C., is at present $23\frac{3}{4}$ cents for hand and $21\frac{1}{2}$ cents for machine work per 1,000 square yards. This does not include garbage collection.

The following table shows the unit cost of street cleaning and garbage collection per 1,000 square meters monthly and for the year, in the city of Manila:

Month.	Number square meters cleaned daily.	Daily average of laborers employed.	Average number square meters cleaned daily per man.	Cost of cleaning per 1,000 square meters.		
				Superintendence and labor.	Carting.	Total cost.
1902.						
July -----	1, 325, 589	425	3, 119	\$0. 116	\$0. 068	\$0. 184
August -----	1, 325, 589	397	3, 339	. 125	. 078	. 203
September -----	1, 325, 589	398	3, 330	. 106	. 077	. 183
October -----	1, 325, 589	402	3, 297	. 097	. 072	. 169
November -----	1, 325, 589	401	3, 305	. 099	. 074	. 173
December -----	1, 325, 589	414	3, 201	. 081	. 068	. 149
1903.						
January -----	1, 325, 589	375	3, 534	. 102	. 073	. 175
February -----	1, 325, 589	407	3, 249	. 112	. 077	. 189
March -----	1, 325, 589	407	3, 249	. 089	. 075	. 164
April -----	1, 325, 589	377	3, 516	. 092	. 076	. 168
May -----	1, 325, 589	390	3, 398	. 094	. 074	. 168
June -----	1, 325, 589	402	3, 297	. 117	. 075	. 192

Total average cost per 1,000 square meters cleaning \$0.102
 Total average cost per 1,000 square meters carting074

Grand average cost per 1,000 square meters176

The following table shows the cost of transportation used in street cleaning monthly and total for the year:

Month.	Sprinkling wagons.	Two-horse wagons.	Dump carts.	Bull carts.	Cost.				Total cost.
					Single wagons.	Two-horse wagon.	Dump carts.	Bull carts.	
1902.									
July -----		\$27.50	\$1,351.50	\$441.00	-----	\$107.52	\$1,973.19	\$617.40	\$2,698.11
August -----		12.00	1,761.00	441.00	-----	46.91	2,571.06	617.40	3,235.37
September -----	\$26.00	8.00	1,714.00	393.50	\$101.66	31.28	2,502.44	536.90	3,172.28
October -----	118.50	4.50	1,957.00	92.00	463.33	17.60	2,857.22	104.72	3,442.87
November -----	274.50	2.50	1,980.50	60.00	1,072.29	8.78	2,891.53	64.61	4,037.21
December -----	227.00	3.00	2,003.00	62.00	887.57	11.73	2,924.38	66.76	3,890.44
1903.									
January -----	290.50	7.00	2,010.50	62.00	1,135.85	27.37	2,935.33	65.26	4,163.81
February -----	300.00	29.00	1,849.00	56.00	1,173.00	113.39	2,699.54	58.80	4,044.73
March -----	358.00	1.50	2,119.50	14.00	1,389.78	5.86	3,094.47	15.05	4,515.16
April -----	377.00	1.00	2,071.50	-----	1,474.07	3.91	3,024.39	-----	4,502.37
May -----	360.00	-----	2,098.00	-----	1,407.60	-----	3,063.08	-----	4,470.68
June -----	285.00	2.00	2,042.50	-----	1,114.35	7.82	2,982.05	-----	4,104.22
Total ---	2,606.50	98.00	22,957.00	1,621.50	10,229.50	382.17	33,518.68	2,146.90	46,277.25

The following table shows the area of streets sprinkled in square meters and the cost per 1,000 square meters for each month and total for the year:

Month.	Area of streets sprinkled twice a day.			Number of days streets were sprinkled.	Total in square meters.		Average number laborers employed.	Average cost per 1,000 square meters sprinkling.
	By hose.	By wagon.	Total in square meters.		Sprinkled daily.	Sprinkled during month.		
1902.								
July	489,366		489,366	10	978,732	9,787,320	65	\$0.062
August	489,366		489,366	14	978,732	13,702,248	37	.062
September	489,366		489,366	15½	978,732	15,170,346	37	.062
October	512,890		512,890	28	1,025,780	28,721,840	36	.079
November	292,303	236,241	528,544	28	1,057,088	29,598,464	44	.096
December	239,839	332,036	571,875	22	1,043,750	25,162,500	31	.063
1903.								
January	245,375	382,009	627,384	27	1,254,768	38,878,736	34	.070
February	237,963	397,612	635,575	27	1,271,150	23,822,130	34	.065
March	343,250	495,235	838,485	31	1,676,970	33,386,070	43	.067
April	358,707	493,273	851,980	29	1,703,960	49,414,840	45	.132
May	442,037	395,616	837,653	30	1,675,306	50,259,180	54	.072
June	421,323	426,090	847,413	27	1,694,826	45,760,302	53	.060

Total square meters sprinkled during year	358,663,976
Number gallons water used by sprinkling wagon	30,820,670
Daily average number of laborers employed	42
Average cost per 1,000 square meters sprinkling	\$0.074

Collection of garbage.—This branch of the service has been working during the past year under difficulties, principally on account of the fact that householders made absolutely no difference in garbage, sweepings, or other refuse. All efforts have failed to force the residents to separate the matter, as is done in all cities of the United States. All manner of refuse, even night soil, is frequently found in the garbage receptacles.

Another fact that has contributed largely to prevent proper working of this branch has been the lack of suitable transportation. The sanitary dump carts used have been in the service for years, and the corrosive action of the refuse has caused them to become leaky and generally unserviceable.

The animals when passing over the ground at the various dumps injure their feet on bits of glass, nails, etc., and are consequently laid up in the hospital for treatment.

Dumping in the suburbs has many objections. It is crude and unsanitary; it is costly and dangerous, owing to the fact that it requires close and constant supervision to prevent fires from spreading, which fires are kept burning to destroy paper and other light refuse.

The method of dumping garbage at sea is also unsatisfactory. At certain seasons of the year the scows can not go out a sufficient distance to prevent the tide or winds from throwing the refuse back on the beaches of the Luneta and Malecon Drive.

Cremation is the best method of disposing of city garbage. There

have been in operation two crematories of capacity entirely too small to handle the large amount of matter collected, even when working to their full capacity.

These crematories are old, and having been hastily built and working continuously, are beginning to show signs of weakness.

The following table shows the number of cart loads of material removed from the streets monthly and total loads for the year :

Month.	District.							Night work.	Total cart loads.
	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.		
1902.									
July.....	1,000	2,185	1,004	2,259	1,806	2,921	353	-----	11,528
August.....	1,326	2,453	1,067	2,680	1,898	2,205	283	-----	11,912
September.....	1,164	2,321	1,078	2,681	1,969	2,064	213	-----	11,490
October.....	1,325	2,399	1,026	2,526	1,543	2,133	188	-----	11,140
November.....	3,121	2,445	864	2,817	1,564	2,021	168	295	11,495
December.....	1,252	2,566	1,034	2,466	1,601	2,119	313	299	11,550
1903.									
January.....	1,348	2,776	1,026	2,422	1,775	2,285	426	439	12,497
February.....	1,117	2,517	880	2,657	1,784	2,083	389	523	11,950
March.....	1,562	3,176	1,022	2,715	1,964	2,580	355	516	13,890
April.....	1,808	3,197	1,132	2,779	1,978	2,634	262	369	14,159
May.....	1,825	3,810	1,375	3,064	2,512	3,036	239	367	16,228
June.....	1,866	3,926	1,880	3,234	2,728	2,982	238	357	17,211
Total.....	16,914	33,771	13,388	32,300	23,122	29,063	3,427	3,165	155,150

The following shows the classification, by cart loads, of material removed from the streets, disposition of same, and the names of the various dumps in the city :

House garbage	80,085
Street sweepings and refuse	34,904
Street mud	37,882
Slop	2,257
Burned animals in Trozo fire	22
Total	155,150

Disposed of as follows :

Taken to sea	20,738
Cremated	18,409
Dumped in park	5,393
Dumped in suburbs	110,610
Total	155,150

The disposition of the material, by districts, is as follows :

District.	Name.	Location of dump.	Disposal.
No. 1	Maestranza	Wharf	Taken to sea.
No. 2	Sande	Calle Sande	Filling.
No. 3	Corral No. 2	Calle Azcarraga	Do.
No. 4	San Rafael	Calle San Rafael	Do.
No. 5	do	do	Do.
No. 6	San Antonio Abad	Malate	Do.
No. 7	do	do	Do.

City parks.—The following is a complete list, with area, of all parks within the city:

	Square meters.
Luneta	21,920
Plaza McKinley	4,222
Plaza de Gracia.....	516
Ermita Park	536
Plaza San Sebastian.....	492
Plaza de Calderon.....	4,199
Plaza Santo Tomas.....	1,105
Plaza San Gabriel.....	407
Plaza de San Juan de Letran.....	237
Sampalucan, Plaza	675
Plaza Malate	767
Botanical Gardens	47,000

The last-named park is the largest in the city, and was in a dilapidated condition when the city assumed control. The surface was very low, and drainage was impossible until a large area had been filled and raised to grade. The house occupied by the City Engineer has been painted, closets installed, and a soil-pipe drain laid to the river. Trees have been pruned, trimmed, and transplanted, and walks resurfaced.

A zoological department has been installed in this park, which contains a number of animals and birds. The animal cages are so located as to be in the public view, and it is believed that they are thoroughly appreciated by the large number of people that visit the same daily.

The old propagation station is inadequate for a park of this size. I would respectfully recommend that a new station be built on the present site of the nipa house soon to be demolished.

Grades have been established and curbs are now being set around this park. It is the intention to lay a cement sidewalk around the park during the next three months.

A new site has been selected for a deer park. The animals will be moved to other locations in order to prevent large crowds of people collecting in any one place.

The necessity for acquiring more land for playgrounds in different parts of the city is becoming more and more apparent. The most crowded parts of the city are either entirely unsupplied with breathing spaces or are very inadequately provided with recreation grounds. I have carefully studied this subject from every point of view and would recommend that additional playgrounds in areas from one to six acres be purchased in the crowded and outlying districts of the city.

The following table shows the force employed in the care of parks and cost of same:

Class of labor.	Number em- ployed.	Days.	Cost.
Second-class foreman.....	1	365	\$420.00
Third-class foremen.....	4	1,401	751.53
Gardeners.....	5	1,498	606.90
Carpenter.....	1	136	75.35
Masons.....	3	1,086	571.18
Laborers.....	¹ 142	4,836	9,185.25
Watchman.....	1	11	10.77
Total.....			11,620.98

¹ Average.

The following is the average cost of maintaining horses, harness, mules, ponies, sprinkling wagons, etc., per day:

Shoeing horse or mule.....	\$0.0096
Forage for one horse.....	.5065
Forage for one mule.....	.4483
Forage for one native pony.....	.3247
Forage for one Chino pony.....	.4483
Shoeing native pony.....	.0066
One American teamster.....	2.3333
One native teamster.....	.6666
One native teamster, carretela.....	.4080
Repairs on two single sets harness.....	.06
Repairs one dump-cart harness.....	.02
Repairs one pony harness.....	.0107
Repairs one escort wagon.....	.0566
Repairs one dump cart.....	.04
Repairs one carretela.....	.01
Native laborer.....	.2857
Two-horse team, American teamster.....	3.4841
Dump cart, native teamster.....	1.2427
Sprinkling wagon, two-horse.....	3.8062
Carretela, native teamster.....	.76

Number of native ponies on hand.

Property of Engineering and Public Works.....	4
Receipt from Insular Purchasing Agent.....	6
Total.....	10

Number of animals treated by veterinarian.

City.....	238
Other departments.....	166
Total.....	404

Daily average of animals treated by veterinarian, 34.

Number of animals on hand July 1, 1902.

Month.	On hand.				Received during month.			Total.
	Ameri- can horses.	Ameri- can mules.	Chino ponies.	Total.	Ameri- can horses.	Ameri- can mules.	Chino ponies.	
1902.								
July	97	27		124				124
August	93	27		120				120
September	93	27		120	4	12		136
October	97	38		135	12			147
November	109	36		145	7			152
December	112	36		148				148
1903.								
January	108	36		144				144
February	108	36		144	1			145
March	107	36		143	5	10		158
April	111	46		157	15	2	6	180
May	120	46	6	171	10			182
June	128	46	6	180	7			187

Month.	Issued Water Department.		Transferred. ¹		Died.		Destroyed.			Total.
	Ameri- can horses.	Ameri- can mules.	Water Depart- ment.	Fire Depart- ment.	Ameri- can horses.	Ameri- can mules.	Ameri- can horses.	Ameri- can mules.	Chino ponies.	
1902.										
July					1		3			120
August						1				120
September										136
October		2								145
November			1		2		1			148
December										2144
1903.										
January										144
February	1				1					143
March					1					157
April				4	1	1	2	1		171
May				1	1					180
June							1	1	1	184

¹ American horse.² Four American horses were returned to F. R. Button (rejected).*Daily distribution of transportation.*

Month.	Street cleaning.	Street building.	Street sprinkling.	Spring wagon.	Arroccos shops.	Saddle horse.	City veterinarian.	Water supply.	Police Department.	City electrician.	Mowing machine.	Manure and coal.	Bridge of Spain.	Stable cleaning.	Disbursing officer.	Stable repair.	Serviceable.	Unserviceable.	Total animals.
1902.																			
July	57	44		2	2							2			2		109	11	120
August	53	40		4	4			4				2			4		111	9	120
September	58	36	4	4	4						2	2			2		112	23	135
October	59	46	14	4	4	2	1				2	2			2		136	9	145
November	65	37	20	2	4	3	1				2	4			2		140	8	148
December	56	41	22	2	2	1	1			2		2	2	1	2		134	10	144
1903.																			
January	62	39	22	2	4	1	1							1	2		134	10	144
February	63	28	22	2	4	1	1			2				4	2		129	15	144
March	70	33	26	2		1	1			1				2	3		141	16	157
April	74	26	30			1	1	3						2		2	142	29	171
May	69	31	38	4		2		4	1	1				3			153	27	180
June	75	33	24	4	2	2		6							1		157	27	184

Daily average serviceable during year

Daily average unserviceable during year

Daily average on hand during year

133

16

149

Total amount of forage expended and cost of same.

Month.	On hand first of month.		Received during month.		Total on hand during month.	
	Hay.	Oats.	Hay.	Oats.	Hay.	Oats.
1902.						
July			177, 900	133, 308	177, 900	133, 308
August	121, 625	101, 600			121, 625	101, 600
September	49, 260	56, 280	13, 755	2, 774	63, 015	59, 054
October	8, 860	18, 400	103, 755	71, 900	112, 615	90, 300
November	43, 643	34, 736	56, 496	18, 577	100, 139	53, 313
December	32, 475		80, 392	66, 256	112, 867	66, 526
1903.						
January	45, 014	10, 039	61, 320	71, 516	106, 334	81, 555
February	29, 436	26, 733	83, 986	77, 898	113, 422	104, 631
March	50, 444	53, 833	41, 219	20, 343	90, 663	74, 186
April	10, 444	15, 126	129, 021	93, 466	139, 465	108, 792
May	43, 484	46, 136	125, 715	23, 230	169, 199	69, 366
June	65, 418	2, 280	123, 160	66, 266	188, 578	68, 546
Total	500, 103	365, 163	996, 719	645, 534	1, 495, 822	1, 011, 177

Month.	Total expended.		Cost.		Total cost of forage.
	Hay.	Oats.	Hay issued.	Oats issued.	
1902.					
July	56, 275	31, 708	\$1, 249. 28	\$829. 46	\$2, 078. 74
August	72, 365	45, 320	1, 606. 50	1, 185. 57	2, 792. 07
September	54, 155	40, 654	1, 162. 25	1, 035. 22	2, 197. 47
October	68, 972	55, 564	1, 581. 15	1, 453. 50	2, 984. 65
November	67, 664	53, 313	1, 502. 12	1, 394. 62	2, 896. 74
December	67, 278	55, 462	925. 30	1, 015. 56	1, 940. 86
1903.					
January	76, 848	54, 822	1, 229. 84	983. 88	2, 213. 72
February	62, 978	50, 798	1, 113. 95	985. 48	2, 099. 43
March	80, 219	59, 060	1, 291. 53	1, 145. 46	2, 436. 99
April	95, 981	62, 656	1, 699. 82	1, 337. 09	3, 036. 91
May	103, 781	67, 086	1, 837. 96	1, 431. 62	3, 269. 58
June	102, 880	67, 804	1, 822. 00	1, 446. 94	3, 268. 94
Total	909, 396	644, 247	16, 971. 70	14, 244. 40	31, 216. 10

Number of horses, mules, and ponies shod and cost of shoeing.

Month.	To shoeing—			Value of labor.	Value of material.
	Horses.	Mules.	Ponies.		
1902.					
July	140	36	35	\$286. 50	\$34. 62
August	136	35	24	253. 22	30. 22
September	173	45	24	348. 00	43. 97
October	181	71	25	413. 50	50. 34
November	165	45	17	340. 50	41. 52
December	165	45	18	342. 00	41. 63
1903.					
January	141	47	6	291. 00	36. 08
February	108	45	9	243. 00	13. 50
March	70	45	4	178. 50	22. 37
April	139	36	3	191. 50	11. 75
May	146	47	5	196. 00	40. 00
June	151	45	6	201. 50	41. 16
Total	1, 715	542	176	3, 285. 22	407. 16

Cost of shoeing charged to separate departments.

Department.	To shoeing—			Value of labor.	Value of material.
	Horses.	Mules.	Ponies.		
City	1,502	534	125	\$2,908.80	\$362.46
Fire Department	100		32	191.42	22.45
Police Department	91		12	127.50	15.92
Water Department	18	8	2	42.00	5.17
Sheriff	4			6.00	.74
Poundkeeper			3	4.50	.33
City Veterinarian			2	5.00	.24
Total	1,715	542	176	3,285.22	407.31

Cemeteries.—This department has the care and preservation of Paco and La Loma Cemeteries. Paco Cemetery is laid out into 142 sections, divided into subsections or niches, making the total number of niches or vaults 1,760, of which 1,259 are reserved for adults and 501 for children. The small church was cleaned, repainted, and put in good condition. The walks have been repaired, walls whitewashed, and grounds cleaned and partly filled in. It is the intention to continue to fill all the low places and maintain a lawn and plant a few choice shrubs that will aid in beautifying the grounds.

La Loma also has been much improved in the way of cutting down all the weeds and high grass that were found when this cemetery was turned over to this department. The walks also have received some attention.

Number of interments in Paco and La Loma Cemeteries from July 1, 1902, to June 30, 1903.

Month.	Paco.		La Loma.		Total.
	Male.	Fe- male.	Male.	Fe- male.	
1902.					
July	18	21	255	167	461
August	16	16	286	197	515
September	14	17	277	199	507
October	15	12	264	239	530
November	5	9	265	252	531
December	12	10	224	181	427
1903.					
January	14	15	189	155	373
February	9	11	171	127	318
March	9	6	184	109	308
April	11	9	173	101	295
May	16	8	379	166	529
June	13	12	210	129	364
Total	152	146	2,837	2,022	5,157

City crematories.—The city owns and controls two crematories, located as follows:

Santa Cruz crematory, located in the district of Santa Cruz in the rear of Bilibid Prison; capacity, about 40 tons per day. The other is located in the district of Paco, south of Calle Real; capacity, about 40 tons per day.

The above crematories are crude affairs, having been hurriedly built during military days and constructed with what materials were on hand at that time. They have served their purpose, being intended solely for cremation of animals. For the past year about forty or fifty loads of garbage have been cremated daily at each crematory along with the regular work of animal cremation, which has been very wearing on the plants, and as a consequence they are badly in need of repairs. It is presumed that the Santa Cruz crematory can be abandoned as soon as the Morse-Boulger destructor is completed, which was built under contract by Peabody & Co. and located on the Island of Palomar. This crematory has a capacity of 120 tons per day and is in my judgment able to consume all the garbage on the north side of the Pasig River. The south side of the Pasig should now be considered and a suitable location selected for a new crematory. I would respectfully suggest that the present site of the Paco crematory be considered. The selecting of this site for a crematory should be considered along with the proposed site for city stables, in order that if possible the crematory and stables may be located as near together as practical, thus saving the animals much unnecessary travel after they have finished their work.

Operation of the crematories during the year 1903.

Animals cremated.	Number.	Loads cremated.	Number.
American horses	278	Slop	3, 150
Native horses	1, 032	Street refuse	2, 702
Carabao	266	House garbage	15, 148
Cows	714	Flour	7
Dogs	714	Preserves	85
Pigs	2, 222	Jam	29
Hogs	1, 083	Rice	17
Goats	18	Crackers	10
Sheep	64	Bacon	6
Deer	5	Beans	15
Cats	6	Cheese	3
Rabbits	1, 073	Onions	3
Monkeys	8	Tobacco	11
Turkeys	73	Tomatoes	3
Ducks	103	Potatoes	3
Birds	728	Cabbage	3
Fowls	2, 674	Matches, etc	12
Rats	15, 922	Total loads cremated	21, 202
Mules	35, 209		
	241		
Total animals cremated	61, 719		

Employees.	Number.	Rate per day. ¹	Total days.	Total cost. ²
Foremen	2	\$1. 20	607	\$292. 83
Firemen	4	1. 20	1, 496	770. 79
Laborers	8	. 70	5, 779	1, 384. 94
Total	14		8, 882	2, 448. 55

¹ Mexican currency.

² United States currency.

Material used:	U. S. currency.
538 tons of coal	\$3, 389. 40
240 gallons of oil petroleum	712. 80
Total	4, 102. 20

Water transportation.—The city owns two steam launches, viz, *Washington* and *Jan*. These are employed in transporting crushed stone from the city quarries located on the Island of Talim, in Laguna de Bay, to the city of Manila.

The *Washington* was purchased by the Quartermaster's Department in November, 1899, from civil funds, for the sum of \$9,483.44, United States currency. The *Jan* was purchased February, 1903, by the city of Manila from J. S. Michael, of the firm of Michael, Gasper & Co., for the sum of \$5,500, United States currency. The launches are in good condition and are well suited for the work assigned to them. Each launch is equipped with a nest of six scows of 25 cubic meters capacity each.

It has been impossible to make one trip each day owing to the condition of the river for some months past, but it is hoped, now that the port works have placed a dredge on the river to open the channel, less time will be consumed in making the trip.

The following table shows the daily cost of maintaining city launches:

Employees.	Cost per month.	Cost per day.
1 launch master	\$100.00	\$3.33
1 captain	30.00	1.00
1 engineer	30.00	1.00
1 assistant engineer	25.00	.83
1 steersman	20.00	.66
2 firemen	15.00	1.00
3 sailors	10.00	1.00
Total labor		8.83
Fuel		4.72
Oil, waste, and rope49
Total cost per day		14.04

The following table shows the number of cubic meters of crushed stone and garbage hauled by city launches during year, and cost:

22,860 cubic meters of crushed stone, at \$0.3349	\$7,655.81
20,738 cubic meters of garbage, at \$0.2145	4,448.30
Total	12,104.11

WATER SUPPLY AND SEWERS.

[Mr. R. G. Dieck, superintendent in charge.]

CONSUMPTION OF WATER.

The records of the office show a total operation of 26,792 engine hours during the fiscal year, distributed as follows:

Month.	Engine No. 1.	Engine No. 2.	Engine No. 3.	Engine No. 4.
1902.				
July	658	713	655	95
August	369	695	670	240
September	579	629	587	
October	705	706	643	
November	699	710	384	271
December	672	668		671

Consumption of water for the city of Manila during the fiscal year 1903—Continued.

AUGUST.

[illegible]

SEPTEMBER.

[illegible]

OCTOBER.

[illegible]

NOVEMBER.

[illegible]

Consumption of water for the city of Manila during the fiscal year 1903—Continued.

APRIL.

District.	Services.								Me- tered con- sump- tion.
	Water.				Fire.				
	Num- ber in opera- tion.	In- crease.	De- crease.	Total.	Num- ber in opera- tion.	In- crease.	De- crease.	Total.	
Intramuros	258	1	1	258	99			99	26,238
Binondo	398	2		400	35			35	42,313
Santa Cruz	404	5		409	14			14	36,766
Tondo	228	3		231	21			21	29,867
Quiapo	266	3		269	10		2	8	27,227
San Miguel	109	1		110	9		1	8	22,250
Sampaloc	185			185	2			2	16,940
Dilao	120	2		122	10			10	12,707
Ermita	230	1	2	229	59			59	22,848
Malate	77			77	5			5	19,037
San Nicolas	348	3	1	350	16			16	31,230
Water boats	12			12					14,385
Total									301,808

MAY.

Intramuros	258	2		260	99		1	98	24,121
Binondo	400	4	1	403	35			35	40,093
Santa Cruz	409	9		418	14			14	34,964
Tondo	231			231	21			21	72,033
Quiapo	269			269	8			8	28,128
San Miguel	110	1		111	8			8	19,520
Sampaloc	185	8	2	191	2			2	15,027
Dilao	122	1		123	10			10	12,470
Ermita	229	1		230	59			59	20,978
Malate	77		1	76	5			5	16,566
San Nicolas	350	1	1	350	16			16	28,848
Water boats	12	3		15					15,515
Total									328,263

JUNE.

Intramuros	260	3	1	262	98			98	23,813
Binondo	403	9	1	411	35			35	34,551
Santa Cruz	418	14	1	431	14			14	32,780
Tondo	231	6		237	21			21	17,788
Quiapo	269	9	1	277	8			8	24,421
San Miguel	111	2		113	8			8	18,833
Sampaloc	191	6		197	2			2	14,730
Dilao	123	3		126	10			10	9,860
Ermita	230	3	1	232	59			59	21,452
Malate	76	6		82	5			5	19,482
San Nicolas	350	4	1	353	16		1	15	27,606
Water boats	15	1		16					15,556
Total									260,872

Grand total water consumption, 2,961,180 cubic meters.

Consumption of water and charges, fines, and collections during fiscal year 1903.

Month.	Water pumped (cubic meters).	Water consumed (cubic meters).	Coal consumed.	Water charges.	
				United States currency.	Mexican currency.
July	870,047	869,199	156.6	\$25,271.86	---
August	808,418	809,506	158.4	2,577.10	\$1,715.23
September	736,005	764,859	139.5	392.38	538.34
October	855,922	851,338	167.5	9,305.92	36,208.17
November	852,240	827,414	154.5	5,430.24	2,807.11
December	898,633	899,601	157.7	155.56	99.39
January	924,419	922,727	169.5	17,941.86	25,549.52
February	807,563	806,293	159.2	948.49	2,184.89
March	990,072	994,414	191.8	3,217.05	11.70
April	1,073,706	1,066,458	208.6	18,362.07	12,860.01
May	1,200,967	1,198,278	214.9	5,207.70	2,586.14
June	1,090,528	1,084,492	217.4	841.76	32.34
Total	11,108,520	11,094,579	2,095.6	89,651.99	84,592.84

Month.	Plumbing charges.		Fire-service charges.		Fines.		Total collections.	
	United States currency.	Mexican currency.	United States currency.	Mexican currency.	United States currency.	Mexican currency.	United States currency.	Mexican currency.
July	\$1,657.80	---	\$89.47	---	\$8.13	---	\$27,027.26	---
August	59.42	\$24.80	2.56	\$12.00	84.12	\$236.30	2,723.20	\$1,988.33
September	---	68.51	---	7.50	---	84.50	392.38	698.85
October	270.14	1,372.84	---	197.95	---	54.86	9,576.06	37,833.82
November	41.00	219.30	---	20.82	40.00	278.40	5,511.24	3,325.63
December	---	10.41	---	---	---	92.80	155.56	202.60
January	646.76	979.48	42.07	176.78	---	7.98	18,630.69	26,713.76
February	26.00	103.78	---	12.00	38.00	311.42	1,012.49	2,612.09
March	14.42	---	47.56	---	---	32.66	3,279.03	44.36
April	612.20	648.66	---	174.77	51.00	25.00	19,025.27	13,708.44
May	82.32	129.64	56.45	12.00	55.00	137.35	5,401.47	2,865.13
June	---	---	---	3.00	---	2.46	841.76	37.80
Total	3,410.06	3,557.42	238.11	616.82	276.25	1,263.73	93,576.41	90,030.81

The average daily consumption, as indicated by the above table, on a basis of an average population of 235,000 persons amounts to 129.5 liters or 35.2 United States gallons per capita. From this it may be noted that the consumption is a fair average for cities of the same class as Manila. While not a manufacturing city, the long continuance of the dry season is productive of heavy draughts for sprinkling purposes.

The records of the office of street cleaning show an expenditure of 30,820,679 United States gallons or 116,654 cubic meters of water by the sprinkling wagons.

No returns can be made of the expenditure of water for sprinkling purposes by means of hose, but it is fair to presume that at least 50 per cent more water is used by this method than by sprinkling wagons to produce equal results. This excess in consumption is brought about by flooding, improper handling, loss through insufficient tightening of the couplings, and wastes in the hose.

The total area sprinkled during the year was:

	Square meters.
By hose	182,665,138
By wagon	175,998,838

DEPOSITO.

All work at this point has been in the nature of general repairs. The improvement in ventilation of the basins by the construction of larger and higher ventilator covers has been completed. The main building has been thoroughly painted and repaired within and without and the basins cleaned and investigated.

PUMPING STATION.

Grounds and roads.—The condition of the Santolan road has been a matter of great concern throughout the year. In August of 1902 this road was practically impassable for wagons hauling ordinary loads. The hauling of coal for engines during a large part of the rainy season further increased the bad condition and made transportation of supplies very difficult. The repairs were commenced in September, 1902, and have been prosecuted to date. The road has been widened and straightened, so that two escort wagons are now able to pass with ease. In some places the roadway was found considerably below the level of surrounding land, and during ordinary showers it became little better than a quagmire. The soft material in these low places was removed and replaced by local stone and gravel, and wide and deep ditches were constructed for the purpose of draining the water to the adjoining fields. A traction engine which has been ordered for the water supply will make it possible to complete the repair of the road, and at the same time furnish all the needed transportation for the movement of coal and other heavy supplies.

Upon the site of the old fort within the grounds of the pumping station a coal shed has been erected which is capable of storing a supply of coal sufficient for the operations of the plant for six months. This increased storage capacity has furthermore permitted the transportation of coal during the dry season, and will save the Santolan road very much wear.

Buildings.—The main buildings at the pumping station were thoroughly overhauled. Ventilation was improved by the opening of air spaces beneath the floors. New flooring was laid in the engineer quarters. By a rearrangement of partitions a small office room and a more airy and light storeroom were secured.

A row of houses is now under erection, in cottage form, for the accommodation of the regular employees. These quarters will afford accommodations for at least six families and permit of a better governing and supervision of the employees.

Repairs to engines.—Moving parts of all the engines have been badly worn, because of the almost continuous action of the pumps for several years. Piston rods and piston rings have become pitted and scratched, and all the packing glands have been leaking badly. In consequence a great quantity of steam has been wasted. New parts in quadruplicate

were ordered, but only those parts for engines Nos. 3 and 4 could be installed, because of the demand for water. Repairs on these two engines have been highly satisfactory. Engine No. 4 afterwards developed a serious crack in its main bracket and main bearing cap, which was temporarily repaired, but under the heavy duty soon broke down and the engine was put out of commission. A bracket and cap of heavier section were cast and placed in position, since which time no trouble has been experienced.

Indicator cards have revealed many serious defects in the valve motion, causing much loss of power. These defects will be corrected at a later date when the water consumption falls.

The flooding of the engine room, which in former years occurred regularly at the time of high water, has been prevented by the installation of a double-action Worthington pump, since which time no trouble has been experienced.

Repairs to dam and canal.—With the first rise in the water during July, 1902, the dam began to show signs of weakness and gave way at various points. During the high water no more than temporary repairs, which were of a very unsatisfactory nature, could be attempted. Plans were prepared for a complete repair as soon as the conditions would permit, and although it seemed more proper, from an engineering standpoint, to abandon the present dam and canal and to construct a dam farther up the stream with a canal leading directly to the pumping station, yet time and funds would not permit. Temporary repairs were therefore undertaken. After much delay in the delivery of material the work of reinforcing the dam was commenced on the present site during the month of April. A row of 6 by 6 inch redwood piles was driven along the downstream face of the dam and the exposed face of the canal about 5 feet from the old work and to a depth of from 8 to 10 feet into the hard gravel bottom. Planking 2 by 12 inches was then nailed to the inner face of the piling and to a height of the cut-off ends. The space between the old and new work was then carefully filled with local stone, gravel, and clay from the river banks. The downstream side of the work was protected from wash by heavy rock fill. The overflow crest was made to conform with the entire east end of the dam. This scheme of repair has succeeded in diverting the channel and kept the pumps constantly supplied with water. The northeast line of the dam was raised above the level of the crest about 6 inches and covered with a 6-inch coating of concrete, with a lip extending 12 inches into the body of the dam on the upstream side. The sharp angle in dam was further protected by a heavy stone fill. Although several heavy floods have since passed over the new work, only small leaks have developed, which were at once repaired.

The total cost of this work was:

Item.	Amount.	
	Local currency.	United States currency.
Materials:		
242 barrels cement, at \$5.40	\$1,306.89	
41,076 feet B. M. redwood timber, at \$77.65 per 1,000 feet	3,189.55	
850 pounds dynamite, at \$15.78		\$184.13
4,505 feet fuse, etc., at \$4.75 per 1,000 feet		21.40
1,900 detonators, at \$6.25		11.88
3½ tons coal, at \$6.82		21.31
Total	4,496.35	188.72
10 per cent additional	449.64	18.87
Aggregate	4,945.99	207.59
Labor:		
General foreman, 1½ months, at \$100		166.67
Teamster, Water Supply, 1 month, at \$60		60.00
Machinist, 1½ months, at \$50		66.67
Coal passer, 1½ months, at \$13		17.33
Teamster, Street Department, 1½ months, at \$70		105.00
Day labor	955.65	
Total	955.65	415.67
Transportation:		
Bull carts, Water Supply, 6 months, at \$55	330.00	
Bull carts, 64.5 days, at \$3.50	325.75	
Double American teams, 3.6 months, at \$31.72		104.19
Total	655.75	104.19
Résumé:		
Materials	4,945.99	207.59
Labor	955.65	415.67
Transportation	655.75	104.19
Total to June 30	6,557.39	727.45

Pipe extensions.—During the year the following extensions were made:

Place.	Size.	Length.	Cost. ¹
	<i>Ins.</i>	<i>Meters.</i>	
Custom-house yards	4	152.6	\$590.60
Calle Duque de Alba	4	90	442.15
Plaza Lawton	2	41.4	63.38
Calles Guipit and Balicbalic	5	680	1,776.02
Calle Arroceros	5	27.3	146.86
Calle San Sepulcro	3	78.15	123.51
Calle Paz	5	26.5	78.57
Calle Arquiza	4	221	247.79
Calle Solana	4	57	147.48

¹ United States currency.

The total extensions were 1,323.95 meters, or 4,342.7 feet.

General repairs.—The supply system has been generally overhauled during the year. The old valve boxes with their unwieldy covers had given much trouble because of their restricted size. A cover of circular form was designed, and the old brickwork of the boxes was replaced by a heavier structure. Where conditions permitted round valve boxes were constructed, covers resting directly on the masonry, and rectangular forms were constructed with covers resting on a grill work of scrap-steel

shapes. Forty-nine round boxes were built at a total cost of \$1,406.46, average cost \$28.70, and 45 rectangular boxes were built at a cost of \$1,386.12, United States currency, average cost \$30.80.

STREET PLUGS.

Great breakage occurred during the year in the street plugs. The keys, threads, and packing failed together and lids were broken in all parts of the city. New keys were ordered and an improved lid of more compact design was introduced and less trouble was noted, but the breakage of the lids continued. It was therefore determined to remove the hydrants from the streets and place them upon the sidewalks. This work was commenced during the month of June. The removals noted have been nearly completed within the district of Intramuros, and the work will be pushed until all plugs are removed from the highways.

FIRE AND SPRINKLING HYDRANTS.

The first shipment of hydrants of the post pattern was received late in the year, and but few have been installed. Lack of specials and tapping machines of large size has rendered this work, and made installation, quite expensive. It is worthy of note that the hydrants are too large for the present mains, and temporary connections only have been made. It is the intention, however, to remove such connections when the new distributing system is laid. A shipment of hydrants with large engine suction has been ordered, and installations will be made with these along the larger mains.

SHOPS.

The shops have been moved from the old Cuartel del Fortin to the present quarters at the Arroceros Market. Because of the restricted floor space and small yards, much confusion has resulted from the transfer of materials. A new drill of large power has been installed. A meter-testing apparatus is in good working order and the blacksmith shop is in good condition. A power plant is very much needed at the shops, and plans are now under way for the installation of an engine and shafting to operate all the machines. The transfer of the shops deprived the water guard of quarters, and compelled the office to provide suitable room for the pony transportation. The erection of a stable, barracks, and a house for the district foreman was found necessary. The first two buildings have been completed and are occupied. The third is still under construction. The stable provides accommodations for two ponies and carratelas, while the barracks in reality are six distinct houses of one room each and are occupied by nine workmen under charge of the storekeeper. The total cost of these buildings was: Stable, \$216.72, United States currency (\$463.37, Mexican currency); barracks, \$392.07, United States currency (\$2,070.33, Mexican currency).

Work on distribution system during the fiscal year 1902-3.

Month.	Mains.						Valve boxes, new.	
	3-inch pipe.	4-inch extension.	5-inch linear meters.	Leaks.	Valves re-paired.	Valves set.	Square.	Round.
1902.								
July				78				
August				69			1	
September				73				
October		242.6		6	7			
November				7	7			
December				7	7		2	
1903.								
January			630.0	3	8	2		
February			27.3	2	8			
March				7	3			
April	78.15			7	3		18	
May		278.0	26.5	6		2	11	26
June				8			12	24
Total	78.15	520.6	683.8	273	43	4	44	50

Month.	Number of fire hydrants.							
	Old style.						New style.	
	Set.	Re-paired.	Re-moved.	Reset.	Lids raised.	Lids re-placed.	Post set.	Sprinkling set.
1902.								
July		19			13			
August	2	23	6					
September		18	2		6			
October		18	1					
November		36	1					
December		40						
1903.								
January	5	32	1			39		
February	1	31	2			37		
March		36				21		
April	1	36				17		1
May		34	1			17	1	2
June		23		46		7	1	2
Total	9	36	15	46	19	138	2	5

Month.	Number of public hydrants.					Number of installations.				Number of meters.	
	Re-paired.	Leaks.	Re-moved.	Old post re-moved.	Auto-matic set.	Pri-vate.	Pub-lic.	Dis-con-tin-ued.	Leaks.	Dis-mount-ed.	Re-paired.
1902.											
July	119					57	1	5	3	60	87
August	109					43	2	4	4	57	35
September	87					39	3	4	8	72	59
October	104	31				47	1	5	8	65	113
November	46	39				41	3	6	8	57	73
December	57	8				29	1	2	6	49	61
1903.											
January	37	18				55	4	4	12	50	52
February	45	8				43	4	8	5	37	55
March	47	9				40	2	4	5	46	44
April	45	7	6	1		22	2	7	3	46	84
May	36	7	11	2		44	1	11	2	44	67
June	29	6	5		3	63		5	3	36	35
Total	761	133	22	3	3	523	24	65	67	619	715

SPECIAL SPRINKLING SERVICE.

The result of heavy draughts for street-sprinkling purposes in Ermita, Malate, and San Nicolas districts has caused the pressure in these regions at times to become extremely low. There is no method at present to carry more water into the districts, and the main service pipe is being taxed to its utmost. In order to relieve this condition a separate street-sprinkling service is proposed for the districts of Malate and Ermita, contemplating the use of sea water by pumpage into the storage tanks situated on the bay front. A gasoline or petroleum motor is recommended for this service because of its small cost and ease of operation under the variable conditions to be met. Three tanks will be found necessary. The estimates contemplate the introduction of one gasoline engine and double-acting pump delivering 200 gallons of water per minute, three elevated tanks and connecting pipe lines.

The probable cost is estimated to be:

	U. S. currency.
Pump and engine.....	\$750.00
Tanks, two at \$150, one at \$250.....	550.00
Pipe line in place, 1,275 meters at \$3.50.....	4,462.50
Total	5,762.50

This system would immediately relieve the conditions existing in these districts and furnish the street-sprinkling service with a steady supply. It is also believed that the sea water would be effective as a disinfectant.

HIGH-PRESSURE FIRE SERVICE.

The crowded condition of the shipping along the bay and river fronts demands a more efficient fire service than is furnished by the present system of post hydrants. It is not to be supposed that the fire service from the ordinary street mains can be neglected, but there should be a supplementary service of high pressure, supplied either by fire boats or by a central high-pressure station, or by a combination of both. The districts most requiring protection are Intramuros, Binondo, and San Nicolas. The pressure in the mains at the present time, or which it may be possible to secure by any new construction, can not exceed an average during maximum draught, which occurs in the morning between 6 and 12 o'clock, of 25.3 pounds. This pressure is quite inefficient to throw a strong stream to the height of a third floor. Even the location of larger mains in the streets can not serve for more than a temporary reservoir, which would be rapidly emptied in time of continued fire where many engines would be necessary.

The needs of the service in Manila, with its low, quick-burning buildings and the liability of a rapid spread of flames, are large mains under a pressure of 125 pounds, numerous hydrants, and quick-acting pumps.

The low construction will enable a long stream to be thrown and permit the fire to be fought from a considerable distance. The Pasig River forms a natural barrier to the operation of a high-pressure system from a central station, and if Intramuros and the districts of Binondo and San Nicolas were protected in this way two stations would be required.

Plans have been prepared, indicating in a general manner the lines most needed for a fire service. From these plans it may be seen that three fire districts are provided, but that designated as District No. 3 should be considered as an auxiliary to District No. 2, from which pressure station it would secure its supply.

It is assumed that four nozzles, delivering 175 gallons of water per minute, will be required to cover District No. 1, and that six nozzles delivering the same rate will suffice for Districts Nos. 2 and 3. In computing the boiler capacity provision has been made by providing for an increase of 50 per cent over that required by the service in order to meet sudden draughts, insure safety during cleaning and breakdowns, and to permit of extensions.

The estimated cost of such installations is as follows:

District No. 1.

Materials:		Pounds.	
2,639 meters 6-inch pipe, at 165 pounds per meter.....		435,435	
3,110 meters 8-inch pipe, at 240 pounds per meter.....		746,400	
		<hr/>	
Total, at \$0.025 per pound.....	1,181,835		\$29,545.88
Three 8-inch valves, at \$50.....			150.00
24 hydrants, at \$50.....			1,200.00
Specials, approximate, 20,000 pounds, at \$0.04.....			800.00
Labor:			
Laying pipe, 5,749 meters, at \$0.50 per meter.....			2,824.50
Setting hydrants, at \$25 per hydrant.....			600.00
Pumping station: Engines (100-horsepower, with 120-horsepower boilers			4,750.00
Pumps and building: Three fire-boat connections, at \$50.....			150.00
		<hr/>	
Total for District No. 1.....			40,020.00

District No. 2.

Materials:		Pounds.	
3,168 meters 6-inch pipe, at 165 pounds per meter.....		522,770	
1,476 meters 8 inch pipe, at 240 pounds per meter.....		354,240	
828 meters 10-inch pipe, at 330 pounds per meter.....		273,240	
		<hr/>	
Total, at \$0.025 per pound.....	1,150,250		\$28,756.25
Three 10-inch valves, at \$80.....			240.00
32 hydrants, at \$50.....			1,600.00
Specials, approximate, 30,000 pounds, at \$0.04.....			1,200.00
		<hr/>	
Total			31,796.25

District No. 2—Continued.

Labor:

Laying pipe, at \$0.50 per meter, 5,472 meters.....	\$2,736.00
Setting hydrants, at \$25 per hydrant.....	800.00
Pumping station, etc.: Engines (125-horsepower, with 150-horsepower boilers)	5,850.00
Pumps and buildings: Three fire-boat connections, at \$50.....	150.00
Total for District No. 2.....	41,332.25

District No. 3.

Materials:

	Pounds.	
1,181 meters 6-inch pipe, at 165 pounds per meter.....	194,865	
756 meters 8-inch pipe, at 240 pounds per meter.....	181,440	
Total, at \$0.025 per pound.....	376,305	\$9,407.63
14 hydrants, at \$50.....		700.00
Specials, approximately 6,000 pounds, at \$0.04.....		240.00

Labor:

Laying pipe, at \$0.50 per meter, 1,937 meters.....	968.50
Setting hydrants, at \$25.....	350.00
Total for District No. 3.....	11,666.13

Résumé.

District.	Cost.	Num- ber of hy- drants.
No. 1	\$40,020.38	24
No. 2	41,332.25	32
No. 3	11,666.13	14
Total	93,018.76	70

Assuming a profit of 15 per cent for contractor, and that all material be given free entry, the cost of these lines complete would be \$106,971.58. With interest on the plant at 8 per cent, depreciation at 6 per cent, and repairs at 2 per cent, the total cost per year, less operating expenses, would be \$17,155.52.

OFFICE.

Through the confusion attending the assumption of civil control the office management has been somewhat neglected. Files were badly kept and more or less trouble has been experienced by the method of rendering bills. Requisitions were frequently sent forward without note, and no record was kept of street work or repairs. A card file of all materials requisitioned for has been kept and is in excellent operation, providing accurate data for future estimates. A system of daily reports has been instituted under the heads of pipe location, general repairs, pipe installations, and hydrant installations. Each time a main is exposed during

work a card is prepared and forwarded to the office, on which is stated the precise location of the pipe, with actual cost of labor and material for the work. In this manner a large amount of valuable information has been secured at practically no cost. In ten months the index has grown, until the following conditions have been reached:

	Cards.
Pipe locations	419
Pipe repairs	379
Pipe installations	11
Fire-hydrant installations	6

Tests have been made upon types of meters most common in use in this city under varying conditions of head, opening of valve, and positions of dial. This investigation, while not extended to any great length, furnished a fair index of efficiency under normal city conditions and determined the action of the office in selecting five types of meters for installation.

The office has devised an index of meter cards, upon which is preserved a complete record of all meters submitted for installation and returned for repairs.

Attention is invited to the inclosed drawings and also to inclosed table, which indicate the pumpage, metered consumption, and revenue collected by the office of Water Supply for the fiscal year ending June 30, 1903.

SEWERS.

Aside from maintaining the present drainage system, very little work has been accomplished. A sewer was constructed for the Paco police station, along Calle XIII de Agosto from Calle Paz to the Estero de Paco. The sewer was 190 meters in length, 6 inches in diameter, and was laid at a cost of \$185.43, United States currency. This sewer has given satisfaction, and no stoppages have been noted, although laid at a very small grade. The outfall sewer for the Malate Barracks was badly broken up by wave action and failure in its foundation. The broken section was removed and relaid upon a concrete bed 6 inches in thickness. Up to the present time no storms of any considerable violence have tested the work, but the extension has succeeded in removing a very offensive nuisance which existed at the point of the old discharge. Repairs cost \$60.30, United States currency.

The department has also been engaged in the collection of information regarding the size, depth, and location of all sewers which have been exposed for any purpose, and aside from this no other work has been attempted.

It can not be denied that a thorough inspection and repair of the present drainage system is necessary. The sewers are leaking badly and omit foul odors. The outfalls are badly choked and very much restricted in sections. Improved inlets, trapped basins, manholes, etc., are required and should be undertaken at once.

Record of boiler inspections during the fiscal year 1903.

Owner.	Street and number.	District.	Nature of plant.	Type of boiler.	Horse-power, Eng. lish.	Working pressure.	Blow-off pressure.	Boiler tested to—	Installations ordered.	Date of license.
La Corona de Aguila	199 Santo Cristo	San Nicolas	Cigarette factory	Locomotive	6	60	70	105		Oct. 1, 1902
La Electricista	132 San Sebastian.	Quilapo	Electric light	Water tube	130	125	130	191		Oct. 6, 1902
Alhambra	205 Echague	do	Cigarette factory	Locomotive	8	60	60	90	1 gauge cock	Oct. 27, 1902
Alberto Schwenger	60 Barraca	San Nicolas	Distillery	Galloway	15	60	60	90	1 gauge cock, 1 injector	Oct. 29, 1902
Do	do	do	do	do	15	45	45	67	do	Do.
Francisco Saez	14 Plaza de Gofii	Santa Cruz	Cigarette factory	Locomotive	15	40	40	60	1 gauge cock, 1 valve, 1 water column.	Oct. 30, 1902
Juan Pons	174 Observatorio	Ermita	Chocolate factory	Gasoline engine	10					Do.
McCullough & Co.	Plaza de Gofii	Santa Cruz	Printing office	Locomotive	35	80	80	120	1 gauge cock, 1 safety valve.	Nov. 12, 1902
La Electricista	132 San Sebastian.	Quilapo	Electric light	Water tube	300	125	125	187		Nov. 14, 1902
Philippine Lumber and Development Company.	1 Duque de Alba	do	Sawmill	Return-fire tubular	75	80	80	120		Do.
Do	do	do	do	do						
J. M. Fleming	29 Antonio Rivera	Tondo	Rice threshing	Locomotive	75	80	80	120		Do.
Rueda Hermanos.	59 San Marcelino	Ermita	Chocolate factory	Galloway	8	60	60	90	1 gauge cock, 1 injector	Nov. 17, 1902
Chas K. Tom	286 Enrile	Santa Cruz	Sawmill	Gas engine	8				1 gauge cock, 1 safety valve.	Do.
J. G. Azuela	281 Azcaraga	Tondo	Rice factory	Locomotive	60	90	90	135	1 injector, 1 safety valve	Do.
Frank S. Bourns	Rodriguez Arias	San Miguel	Sawmill	Return-fire tubular	60	90	90	90	do	Nov. 24, 1902
Do	do	do	do	do	8	60	60	90	do	Do.
Joaquin Luna	323 Jolo	Binondo	Tobacco factory	Locomotive	20	60	60	90	1 gauge cock	Nov. 29, 1902
M. Javier	304 Azcaraga	Tondo	Rice factory	Lancashire	3	40	40	60	1 gauge cock, 1 safety valve.	Do.
Maria Guison.	223 Aceyteros	do	Lemonade works	Upright tubular						
Ricardo Gochuico	176 San Jacinto	Binondo	Tobacco factory	Locomotive	14	60	60	90		Dec. 1, 1902
Dieg Buil	50 Soler	Tondo	Rice factory	Cornish	20	70	70	105	1 gauge cock	Dec. 2, 1902
Gua Tengco	96 Ylaya	do	Machine shops	Locomotive	14	25	25	37		Do.
Rufino Dy Tiongco	151 San Jacinto	Binondo	Tobacco factory	do	10	40	40	60	1 safety valve	Do.
"Helios"	298 Jolo	do	do	do	6	40	40	60	1 injector	Do.
Lim Tuaco	15 Isla de Romero.	Quilapo	Cornish	do	15	30	30	45		Dec. 6, 1902
M. Earnshaw & Co.	60 Santa Rosa	do	Photograph gallery	Gas engine						Do.
S. Nicolas Iron Works	149 Gandara	Binondo	Distillery	Galloway	28	70	70	105	1 gauge cock	Dec. 13, 1902
Do	15 Barcelora.	San Nicolas	Machine shops	Return-fire tubular	45	60	60	90	do	Do.
R. Alfaro	17 Pefarubia	do	do	Locomotive	20	80	80	120	do	Do.
Uiliang Cauayan	do	Paco	Foundry	Upright	8	60	60	90	1 safety valve	Dec. 28, 1902
Emilio Gonzales	61 Tetuan	do	Tobacco factory	do	4					Dec. 18, 1902
Baer Senior	13 Novaliches	San Miguel	Ilang-ilang distillery.	Upright	6	40	40	120		Dec. 24, 1902

Record of boiler inspections during the fiscal year 1903—Continued.

Owner.	Street and number.	District.	Nature of plant.	Type of boiler.	Horse-power, Eng.-lish.	Working off-pressure.	Blow-off pressure.	Boiler tested to—	Installations ordered.	Date of license.
Mariano de Ocampo.	9 Novaliches	San Miguel	Sawmill	Portable locomotive	6	50	50	75	1 gauge cock	Jan. 8, 1903
A. G. Sibrand Stiegar.	33 Echuague	Quiapo	Distillery	Upright	6	30	30	45	1 injector	Do.
Engracio L. Palanca	160 Gandara	Binondo	Cigarette factory	Locomotive	8	60	60	90	1 gauge cock 1 injector	Jan. 10, 1903
Teodoro Cubarrubias	91 Clavel	San Miguel	Ice plant	Return-fire tubular.	150	120	130	130	1 safety valve.	Do.
Do.	233 San Miguel	do	do	do	150	120	130	120	do	Do.
Joaquin Santa Marina	20 Calderon de la Barca.	Binondo	Insular cigarette factory.	Locomotive	30	80	80	120	do	Do.
Clemente Cochuaco	116 San Jacinto.	do	Cigarette factory	do	10	75	80	120	do	Do.
Pedro de Guzman	18 Salcedo	Santa Cruz	Printing office	Gas engine	6	60	60	90	do	Jan. 17, 1903
Antonio L. ChanUaco	106 Norzagaray	Binondo	Cigarette factory	Portable locomotive	10	60	60	120	do	Jan. 19, 1903
C. Y. Baerman	639 Iris	Quiapo	Printing office	Cornish	4	60	80	120	do	Do.
F. W. Bull	482 Nueva	Malate	Bakery	Gas engine	10	40	50	75	do	Do.
Micaela Nubia	18 Salazar	Binondo	Cigarette factory	Portable locomotive	10	40	50	75	do	Jan. 18, 1903
Chan Chingco	25 Aceyeros	Tondo	Cigarette factory	Gas engine	6	60	60	90	do	Jan. 21, 1903
Idelonso Aldon	97 Aneguil	Quiapo	Printing office	do	13	80	80	120	do	Do.
Pasig Iron Works.	11 Asuncion	Paco	Machine shop.	Return-fire tubular.	12	140	100	210	3 gauge cocks.	Jan. 25, 1903
C. Lopez.	219 Calderon de la	San Nicolas	Cigarette factory	Locomotive	6	60	60	90	do	Feb. 4, 1903
Sy Longa	295 Jolo	Binondo	do	Gas engine	6	60	60	90	do	Do.
Lim Bianco	220 San Sebastian	Quiapo	Distillery	Return-fire tubular	40	100	100	150	3 gauge cocks	Do.
B. Legarda	220 San Sebastian	do	do	Water tube	40	100	100	150	do	Feb. 11, 1903
B. W. Cadwallader & Co.	57 Tanduay	do	Sawmill	Return-fire tubular	20	80	80	120	1 safety valve	Feb. 19, 1903
B. W. Cadwallader.	do	do	do	do	20	80	80	120	do	Do.
Rafael Perez	42 Soler	Tondo	do	Cornish	10 1/2	60	60	90	1 gauge cock	Feb. 17, 1903
Do.	do	do	do	do	10 1/2	60	60	90	do	Do.
Santos Hermanos	571 Lemery	do	Lithographers	Vertical	7	40	40	60	1 safety valve	Feb. 21, 1903
La Flor de la Isabela	134 San Marcelino	Ermita	Tobacco factory	Hervidor	30	50	50	75	do	Feb. 28, 1903
La Clementina	do	do	Distillery	do	70	50	60	75	do	Do.
Do.	do	do	do	do	30	50	50	75	do	Do.
Sy Jayco	298 Jolo.	Binondo	Cigarette factory	Locomotive	6	30	30	45	do	Mar. 7, 1903
Rafael Machuca Go- tauco.	198 Soler	Tondo	Sawmill	Cornish	25	80	80	120	do	Do.
Long Fo y Co.	15 Gagalangin	do	Distillery	do	20	40	40	60	do	Mar. 10, 1903
Juan Rodriguez	3 San Nicolas	San Nicolas	Sawmill	Locomotive return- fire tubular.	60	100	100	150	1 safety valve	Mar. 12, 1903
F. C. de Casademunt.	118 Concepcion	Ermita	Printing office	Vertical	6	80	80	120	do	Do.
Juan Rodriguez	3 San Nicolas	San Nicolas	Sawmill	Locomotive return- fire tubular.	60	100	100	150	1 safety valve	Do.
Ayala & Co	215 San Miguel	San Miguel	Distillery	Vertical	6	50	50	75	do	Do.

Do	do	do	do	Multitubular	40	40	60	Do.
Do	do	do	do	do	40	40	60	Do.
M Nubia	137 Ycaaraga	Tondo	Rice factory	Cornish	16	60	90	Mar. 14, 1903
Philippine	107 Yaya	do	Cigarette factory	Locomotive	6	60	90	Do.
Trust Co.								
San Miguel Brewing Co.	59 San Miguel	San Miguel	Oil mill	Return tubular	60	55	82½	Mar. 17, 1903
Do	do	do	do	Cornish	20	70	105	Do.
Smith Bell & Co	Echague	Quiapo	Cold stores	Lancashire	35	120	180	Do.
Wm Partier	2 Plaza Sta Ana	do	Printing office	Locomotive	12	60	90	Mar. 19, 1903
Inchausti & Co	72 Tandaway	do	Distillery	Water tube	75	80	120	Mar. 24, 1903
Do	do	do	do	do	75	80	120	Do.
Do	do	do	do	do	150	120	180	Do.
San Miguel Brewing Co.	154 San Miguel	San Miguel	Brewery	Galloway	150	120	180	Do.
Vicente Cenjaz	513 Paz	Santa Cruz	Chocolate factory	Cornish	10	30	45	Mar. 26, 1903
Juan Marcelino Gomez	206 Lacoste	do	Lithographer	Vertical	6	35	50	Do.
Tuasun y San Pedro	102 Globo de Oro	Quiapo	Furniture factory	Cornish	30	65	100	Mar. 28, 1903
John Wilson	60 Barraca	San Nicolas	Machine shop	Return-fire tubular	25	45	75	Mar. 31, 1903
Hilario Sunico Her-	49 Jaboneros	do	do	Vertical	16	40	60	Do.
manos,								
Germal	4 Marquez de Co-	Ermita	Cigarette factory	Locomotive	30	100	150	Apr. 2, 1903
Flor de la Isabela	51 Canonigo	do	Tobacco factory	Galloway	30	60	90	Do.
La Clementina	134 Marquez de Comillas	San Miguel	Distillery	do	80	60	90	Do.
Pedro P. Roxas	154 Malacatang	do	Brewery	do	180	50	75	Apr. 4, 1903
Do	do	do	do	do	150	100	150	Do.
Frank S. Bourns	Int. Rodriguez Arias.	do	Sawmill	Return-fire tubular	100	100	150	Apr. 7, 1903
Do	do	do	do	do	80	100	150	Do.
Knaist Sturm	502 Lemery	Tondo	Macaroni factory	Vertical	6	30	45	Do.
Manila Ice Plant Company.	233 San Miguel	San Miguel	Ice plant	Water tube	150	130	200	Do.
Insular Cigar Factory	do	do	do	do	150	130	200	Do.
Smith, Bell & Co.	Plaza de Binondo.	Binondo	Cigarette factory	Locomotive	80	80	120	Apr. 11, 1903
Do	Isla Provisor	Ermita	Temp packing	Cornish	30	80	120	Do.
	do	do	Ship yards	do	6	80	120	Do.

BUILDINGS AND ILLUMINATIONS.

[Mr. A. L. Dorrington, superintendent in charge.]

All public and rented buildings in use by the city have been cleaned and cared for daily, and the general condition has been greatly improved during the year.

The total cost of supplies expended during the year in cleaning and caring for municipal and public buildings amounted to \$16,409.86, United States currency.

The following buildings and lands are rented by the city for public purposes:

For school purposes.....	25
For police purposes.....	9
City hall	1
Land registration and registrar of deeds.....	1
Superintendent of cemeteries.....	1
Lands for crematories.....	2
Lands for market sites.....	2

During the year leases have been made for the following buildings:

For school purposes.....	12
For police purposes.....	2
Land registration and registrar of deeds.....	1
Storehouse	1
Superintendent of cemeteries.....	1
City hall	1
Morgue	1

Lands have been leased as follows:

For market sites	2
For crematory	1
For morgue	1

The following rented buildings have been vacated, leases canceled, and better buildings procured instead:

For school purposes.....	6
For police purposes.....	3
For city hall.....	1
Morgue	1
Storehouse	1

Cost of rents for the year, \$32,982.04, United States currency.

Repairs and alterations have been made as follows:

Municipal Building, Calle Victoria.—Interior of building changed for use of city hall; storehouse made in rear. Platform and stairs built for disbursing officer; entire building overhauled preparatory to painting; installed two additional water-closets and remodeled old plumbing; painted all interior new work.

Old City Hall.—Installed office signs throughout the building; repaired water-closets and water tank; painted telephone booths; repaired

awnings and plumbing. City Attorney's office, repairs to doors and locks; drafting room, repairs to faucets, cabinets, and large table; secretary's office, repairs to desks and tables; Municipal Board, repairs to desk, map racks, and four fan shelves; Secret Service office, made three new partitions, new cabinet, and repaired desk and furniture; city schools, repairs to furniture; building permits, installed railing.

Headquarters Fire Department.—Repairs to roof, closets, replaced window glass, repaired skylights, installed three shower baths, three water-closets, four wash basins, two urinals, and changed entire plumbing to conform with sanitary rules; painted interior and exterior of building; constructed new cesspool.

Paco fire station.—Remodeled plumbing and installed two water-closets, two wash basins, and one urinal; painted interior and exterior of the entire station; repaired bathroom and installed one shower bath; constructed four stalls and painted same; made filing case for office; made two blackboards; repairs to down spouts and gutters; made back entrance to building and installed large double doors; repairs to roof.

Tanduay fire station.—Repairs to faucets, built cesspool, and installed one water-closet, one urinal, two wash basins, and two shower baths; built and installed 8-foot watering trough for horses; enlarged doorway for new apparatus.

Audiencia fire station.—Installed two water-closets, two baths, three wash basins, two urinals, painted interior and exterior of building.

San Nicolas fire station.—Painted ten new stalls; built and installed 12 feed boxes; built and installed 30 lockers.

Divisoria Market.—Extensive repairs to roof; repaired and cemented floor; repairs to hydrants; introduced new roof on superintendent's quarters.

Quinto Market.—Repaired and cemented floors; repaired hydrants; repaired gutters and down spouts; introduced roof on superintendent's quarters and made two windows; extensive repairs to roof.

Anda Market.—Repairs to gutters and down pipes on fish tables; built market office and quarters for superintendent; installed partitions and numbers for tables; painted tables, office, superintendent's quarters, and inclosure to water-closets; extensive repairs to roof.

Arranque Market.—Building entirely overhauled.

Matadero.—Repaired roof and scalding vats; repaired fence and made new gates in stockyards; new fire picks and grates in crematory; buildings painted, interior and exterior.

City stables, Tondo.—Repairs to water spouts and gutters; installed four awnings over office windows.

Malate police station, native.—Extensive repairs to roof and ceiling; made new door casing and door, replaced all broken window glass, and repaired window sash; building given general overhauling preparatory to painting.

Quiapo police station, native.—Made and installed galvanized-iron urinal.

Mounted police station, Tondo.—Extended soil pipe.

Native police station, Sampaloc.—Built stalls for patrol horses.

Paco police station.—Installed four water-closets, six shower baths, and four urinals; built back entrance and stairs to building; made and installed bar doors and windows on lower floors; converted back cell into water-closet; recemented floors to bath and toilet rooms; changed windows on upper floor, making them swing instead of slide to prevent rain from beating in; built room for motor; installed water connections for entire building.

Anloague native police station.—Closed back entrance in rear of building; screened off closets; repaired floor, roof, and eaves; also repaired closets.

Tondo police station.—Repairs to water pipes.

Parian police station.—Introduced temporary closet for prisoners; made soaking tub for patrol horses.

Santa Cruz police station.—Repaired doors and made iron bars for windows and doors in cell; made platform for alarm apparatus; made new floor in office; installed two additional water-closets, three baths, and two urinals; installed two awnings over office windows; repaired skylight and roof; built women's cell.

Anloague Metropolitan police station.—Installed two skylights over office; repaired office floor, installed three water-closets, three wash basins, and three urinals.

River and Harbor police station.—Overhauled plumbing and installed three water-closets, two urinals, and three wash basins; building painted, interior and exterior; made and installed sink for kitchen; constructed drains.

Calle Crespo school.—Overhauled and painted entire building, interior and exterior; installed iron awnings; laid new floor in lower rooms, and installed one water-closet.

Tondo school.—Made and installed one flagstaff; placed screens for closets.

San Pedro school.—Repairs to roof; partitioned off front room; building painted, interior and exterior.

Malate schools.—Both buildings thoroughly overhauled; changed vent pipes in closets and repaired drains; buildings now being painted, interior and exterior.

Gagalangin school.—Painted interior and exterior of building; built double water-closet and vault.

San Miguel school.—Put in two partitions; interior of building painted by owner.

Sampaloc school.—Put in partition; interior and exterior of building was overhauled and painted by owner.

Santa Mesa school.—Building overhauled and interior and exterior painted by owner.

Luneta.—Eighty-foot flag pole erected.

Disbursing office.—Repairs to office furniture.

City Assessor and Collector's office.—Reclothed ceiling of two rooms; replaced all broken glass; repairs to floor in vehicle-tax department; repairs to closets; two water-closets and one urinal installed; partitioned off one large room 30 by 60 feet and painted same; installed ceiling fans for tax-revision board; changed stairway and landing; removed partition in rear of back room.

City schools warehouse.—Removed and changed partitions; repaired water-closets; installed shelving; painted office.

Public water-closet back of English drug store.—Repairs to plumbing and painted screens.

Court of First Instance.—Removed Judge Sweeney's court into adjoining room.

Prosecuting Attorney's office.—Extensive alterations for new office quarters in Audiencia Building.

Court of Land Registration and Registrar of Deeds.—Built and installed bench and platform in court; made four office signs; installed three shelves for fans; removed office in court from old City Hall to No. 138 Calle Real, Intramuros.

Municipal Court.—Installed ceiling fan; made and installed bench and railing; installed iron bars over windows in prison room.

Total cost repairs for year, \$17,457.81, United States currency.

Lights.—During the year the following increases have been made to public lighting and electrical service:

Location.	Lights.	
	Candle-power.	Number.
Nozaleda, Paco.....	2,000	9
Tondo.....	2,000	18
Trozo.....	2,000	11
Santa Ana Road.....	2,000	10
Calle Gonzales.....	2,000	1
San Luis.....	2,000	1
Anda Market.....	1,500	3
Arranque Market.....	1,500	3
Tanduay fire station.....	16	13
Paco fire station.....	16	3
Paco police station.....	16	23
Anloague police station.....	16	7
Secret Service office.....	16	5
San Nicolas fire station.....	16	44
Audiencia Building.....	16	17
Santa Cruz police station.....	16	16
Land Registration Court.....	16	7
Prosecuting Attorney's office.....	16	12
Asuncion school.....	16	2

Fan connections.

City hall	6
Land Registration Court.....	3
Municipal court	1
Sheriff of Manila.....	1
•Fire Department headquarters.....	2
Tax-revision board	1

The following table shows the aggregate number of lights and fans as reported above:

Arc lights, 2,000 candlepower.....	50
Arc lights, 1,500 candlepower.....	6
Incandescent lights, 16-candlepower.....	149
Fan connections	14

Interior lighting remodeled.—During the year the following interior lighting has been remodeled to conform with underwriter's rules:

Location.	Lights.	
	Candle-power.	Number.
Two bandstands, Luneta	16	60
Asuncion school	16	9
Paco fire station	16	16
Headquarters Fire Department	16	36
Land Registration Court	16	16
Anloague police station	16	7
Total		144

Night and day circuits have been installed in the following buildings: Headquarters Fire Department, Santa Cruz police station, Parian police station, Anloague police station, Paco police station, and Sampaloc police station.

The night and day circuits have been installed in all police and fire stations throughout the city for the purpose of connecting up with the alarm system.

Meters have been introduced in all public buildings, and have greatly improved the service and reduced the cost of lighting.

Day circuits have been established for private lighting throughout the following districts: Ermita, Malate, Sampaloc, Paco, Intramuros, Santa Cruz, Binondo, San Nicolas, Tondo, and Trozo.

Plans are under way for the establishment of lights on Calles Herran, Santa Mesa, Isaac Peral, Santa Monica, Folgueras, Rada, Saliñas, Lardizabal, Reten, Palmera, Anton, Roque, Castaños, Balicbalic, Guipit, and Lavenderos.

The entire line along the Malecon Drive has been changed by removing the poles and wires from among the trees between the wagon road and walk to a location on the commons, which has greatly improved the service and removed, so far as possible, all danger to the public. Formerly it was quite a common occurrence for the wire along the old line to be

broken during the typhoon season. The change thus made prevents further damage to the trees. The harbor lights along the Pasig River have been changed, greatly benefiting the service.

The municipality has now in operation the following lights along public streets and in public buildings:

Arc lights:	
2,000-candlepower (streets)	241
2,000-candlepower (harbor)	18
1,500-candlepower	15
Incandescent lights:	
20-candlepower (streets)	1,002
20-candlepower (Divisoria Market)	50
16-candlepower	492
10-candlepower	6
Fan connections	14
Motor connections	6

Total cost of service for the year, \$44,304.77, United States currency.

During the year one hundred and sixty-five 20-candlepower lights were discontinued and replaced by arc lights for the benefit of the service. Eight 2,000-candlepower arc lights were discontinued on account of the Trozo fire.

Telephones.—Telephones in all fire stations throughout the city were changed by substituting Ericsson apparatus for the old pattern, greatly improving the service.

During the year the following telephones have been installed: Señor Herrera, president Municipal Board; Mr. Sleeper, member Municipal Board; Mr. McDonnell, member Municipal Board; office Prosecuting Attorney; residence Assistant Prosecuting Attorney; office sheriff of Manila; city shops; and Tanduay fire station.

The telephone used by Mr. A. L. B. Davies, formerly secretary Municipal Board, has been transferred to the Insular Purchasing Agent.

The telephone service throughout the city has been greatly improved. The entire service was suspended for four days on account of typhoon. The old line crossing Camp Wallace has been removed and a new line reestablished along the Luneta. The position of eight apparati were changed for the convenience of users during the year. The total cost of service for the year was \$1,264.84, United States currency.

Construction.

[Amounts stated in United States currency.]

Location.	Nature of improvement.	Amount expended.
Santa Cruz fire station.....	Built addition and remodeled old structure; completed construction of addition and remodeling of old structure.	\$1,277.54
Tenement house, San Nicolas.....	Built by contract; completed.....	5,918.82
San Nicolas fire station.....	do.....	10,160.41
Arraque Market.....	Overhauled main building; completed.....	1,436.64
Do.....	Addition under construction; expended.....	3,992.85

Construction—Continued.

Location.	Nature of improvement.	Amount expended.
City stables, Tondo.....	Large addition built by contract; completed.....	\$10,817.29
Anda Market.....	Completed construction of market under contract; final payment.....	3,900.00
Do.....	Floor and fittings.....	5,999.61
Crematory, Paco.....	Overhauled by day labor.....	400.00
Crematory, Santa Cruz.....	do.....	400.00
Crematory, Tondo.....	Nearly completed by contract.....	50,000.00
Gagalangin school.....	Completed.....	1,583.09
City pound.....	do.....	4,631.70
Paco police station.....	Completed by contract.....	4,900.00
Total.....		105,417.95

During the year claims for market sites, buildings destroyed on account of contagious diseases, and Trozo fire sufferers were paid to the amount of \$1,419.65, United States currency.

Recapitulation.

Cost of rents for year.....	\$32,982.04
Repairs to markets and public buildings.....	17,457.81
Lights and electrical service.....	44,304.77
Repairs and increase to electrical service.....	1,957.04
Telephones.....	1,264.84
Construction.....	105,417.95
Supplies, cleaning, and caring for public and municipal buildings.....	4,315.12
Salaries, cleaning and caring for municipal buildings.....	12,094.74
Petroleum for municipal and public buildings.....	836.50
Settling claims.....	1,419.65

Grand total 222,050.46

INSPECTION OF PRIVATE BUILDINGS.

[Mr. R. M. Loper, inspector of buildings, in charge.]

Building operations in the city of Manila during the fiscal year ended June 30, 1903.

Month.	Applications made.	Permits paid.	Issued gratis.	Receipts.	
				United States currency.	Mexican currency.
1902.					
July.....	257	207	22	\$427.30	-----
August.....	257	196	15	343.90	-----
September.....	320	314	9	546.39	\$69.00
October.....	331	269	29	413.31	10.00
November.....	360	304	22	708.38	-----
December.....	348	324	15	600.07	-----
1903.					
January.....	426	362	-----	203.59	1,644.89
February.....	451	374	-----	160.92	1,301.63
March.....	554	487	-----	251.86	1,286.08
April.....	569	450	-----	325.81	1,327.40
May.....	801	523	116	201.36	1,320.80
June.....	1,119	669	367	279.56	1,277.25
Total.....	5,693	4,479	595	4,480.45	8,237.05

Building operations in the city of Manila, etc.—Continued.

Month.	Strong materials.				Light materials.			
	New buildings.		Repairs.		New buildings.		Repairs.	
	Num-ber.	Value.	Num-ber.	Value.	Num-ber.	Value.	Num-ber.	Value.
1902.								
July	49	\$154,870	40	\$10,955	80	\$7,060	53	\$1,730
August	40	128,205	48	24,915	76	6,355	37	750
September	39	256,585	58	23,035	102	10,220	43	905
October	48	135,236	50	12,586	166	13,705	22	925
November	116	269,210	29	10,340	120	10,789	45	2,190
December	123	97,015	25	6,390	122	11,014	40	1,775
1903.								
January	100	246,025	44	23,995	172	15,140	32	1,545
February	67	150,240	38	5,280	180	14,116	43	1,855
March	72	122,535	42	5,965	273	25,243	71	2,442
April	66	85,360	51	12,020	227	18,408	81	2,790
May	80	147,410	48	15,310	306	22,905	103	4,285
June	73	145,180	46	20,950	418	34,625	132	5,130
Total	873	1,946,871	519	171,741	2,242	189,580	702	26,322

During the year about 150 buildings were condemned and ordered removed.

A brief comparison with last year's report shows that the number of applications for building permits has increased about 87 per cent, the number of permits issued more than 114 per cent, and the amount collected in fees more than 35 per cent.

For a long time the practical working of this office was crippled owing to an inadequate force of building inspectors, the entire work falling upon sometimes two and sometimes three American and two Filipino inspectors, and in addition the force of inspectors was constantly changing every few months.

On March 16, 1903, the present inspector of buildings was placed in charge and the work of preparing plans and specifications for all proposed municipal buildings and the supervision and inspection of their erection added to the other duties of the office.

The present personnel of the office, including one American building inspector asked for during the next fiscal year, it is hoped will prove a practical working force, and consists in an inspector of buildings, an architectural draftsman, four American inspectors, two Filipino inspectors, one Filipino employed by the day to number or renumber buildings, a Filipino clerk acting as cashier, and two Filipino assistant clerks. It is to be hoped that the present force of inspectors and clerks will continue in the service until the work both inside and outside the office can be systematized.

Considerable work has been done by the architect, Mr. S. J. Fountain, in the three months during which he has been attached to this office, of which the following is a brief summary:

Plans and specifications for addition to Arranque Market (under con-

struction; estimated cost, \$13,000); reading room, Paco fire station (completed; cost, \$440, United States currency); band stand, Plaza de la Barca (under construction; estimated cost, \$850, United States currency); Arroceros shop building (estimated cost, \$4,500, United States currency); Tanduary fire station building (estimated cost, \$20,000, United States currency); veterinary hospital building, Palomar (estimated cost, \$5,000); Bancusay Market building; closets for Arranque Market (estimated cost, \$400). Water-color sketch plans for school building, Tondo (estimated cost, \$100,000); normal school building, Malate (estimated cost, \$50,000); central fire station building (estimated cost, \$75,000).

Much other architectural work of a minor character has been performed. Much unnecessary and annoying labor has been caused the inspector of buildings by the careless preparation of plans for private buildings. Few of those at present preparing such plans are qualified as architects, and I would respectfully recommend that proper regulations be enacted to prevent unqualified persons signing plans and specifications.

Experience has shown the desirability of making certain changes or amendments to the present building regulations, and it is hoped that during the next few months a thorough revision of same may be made.

CITY SHOPS.

The present repair shops and storehouses situated on Calle Arroceros at the site of the old Arroceros Market were occupied by the department on September 10, 1902, and all the property removed from the old storehouse on Calle Audiencia.

The level of the shop inclosure has been raised about 10 inches and graded, and the surface of the portion subject to traffic covered with stone screenings and rolled. Roadway at entrance has been built and curbings installed and the open space in front of storehouses partially sodded. A new shop building 30 by 120 feet has been constructed with equipment for blacksmiths and wheelwrights. Repair shop for harness reconstructed and supplied with a complete outfit of tools.

All repair work to means of transportation required by the various city departments is done at these shops, as well as the shoeing of all horses and mules in the service of the city. These shops supply all the materials and labor and direct all the repairs for municipal buildings.

The area of the shop inclosure is 156,218 square feet, in which are the following buildings and sheds:

Office building, 26 by 29 feet; also used as dwelling by storekeeper and superintendent of shops; also for storing stationery. Carpenter shop, 30 by 94 feet; carpenters' repairs to municipal buildings. Oil house, used for storing oils, paints, and inflammable material; building is stone, 32 by 32 feet. Saddler shop, 32 by 32 feet; stone building. Storehouse

No. 2, 30 by 94 feet; used for storing cement, lime, hay, and old tools, etc.; awaiting condemnation. Horseshoeing, blacksmith, wagon, and paint shop; 30 by 120 feet. Water Department shops, 32 by 94 feet. Main storehouse, 30 by 120 feet; materials and tools stored here. Original building rented Forestry Bureau; 32 by 94 feet. New building erected by Forestry Bureau, including shed, 41 by 69 feet. Space occupied by logs, etc.; Forestry Bureau; about 35 by 51 feet. Shed for making cement curbing, etc., 16 by 36½ feet. New building for Water Supply employees; 25 by 54 feet, with baths and kitchens in rear, 8½ by 54 feet. Residence for subforeman Water Department; 24 by 25 feet. Stable for horse used by Water Department; 12 by 17½ feet. Lumber shed; 20 by 92 feet. Space for stable horse used by superintendent; 13½ by 18½ feet.

A new machine and woodworking shop, 50 by 120 feet, is to be erected at a cost of about \$4,500. In this is to be placed a planing machine, band saw, circular saw, shaper, drills, spoke-tenoning machine, lathe, tire bender, welding machine, bolt cutter, blower for forges, hub-boring machine, and 20-horsepower engine and boiler.

SURVEYING AND DRAFTING DIVISION.

Surveys.—After assuming charge of the office on January 1, 1903, the greater part of the months of January and February were devoted to the reorganization of the engineering department and looking after the needs of the work which had accumulated in the office at the time it was without assistants. The routine of the work in the office since that time is given in the following table:

Grades for buildings.....	2
Street lines for buildings.....	147
Grades for street construction.....	4
Grades for sidewalks.....	17
Surveys for street extensions.....	12
Surveys for bridges.....	3
Surveys for esteros.....	3
Detail plans for construction.....	7
Estimates	16
Land surveys	16
Plans	64
Blueprints	446
Surveys for new streets.....	16
Building plans	9

A river wall back of the Government ice plant, near the suspension bridge, has been rebuilt. This wall for a length of about 90 feet fell into the river, due to the action of the water washing away the foundations from underneath, the wall having been constructed without making suitable provisions for the same. The settling basin for the ice-plant

water supply was also destroyed, and the overflow from the condensing pumps washed away the filling from under the coal bin. Repairs were made by means of a cofferdam, and the foundations for the new wall were carried to a depth of 5 feet below low water, at which depth the concrete foundation was built, on top of which a new settling basin was constructed of stone, with an opening into the river, supplied with screens.

A pipe drain 40 centimeters in diameter was rebuilt, carrying the overflow from the pumps, and two pipes 30 centimeters in diameter were constructed through the wall to care for the roof and surface drainage.

Palomar crematory has been completed, and the retaining walls for the approach have been finished. Owing to the very unstable character of the foundation upon which all this work was located, it was found necessary to construct a pile foundation to an elevation of mean low water, from which point concrete piers for foundations were laid to the surface of the ground, and upon which the crematory and walls and approaches were built.

The work of plotting the old survey notes for the city maps has been undertaken, but the traverses have worked out so poorly that additional field work may be necessary to check the surveys before satisfactory results can be obtained.

Surveys have been completed for a new river wall, approximately 1,000 feet in length, situated on the south bank of the Pasig River and extending from a point near the Santo Domingo gate near the eastern bank of the moat where it joins the Pasig River, and extending to a point opposite and near the site of the Almacen gate. As soon as soundings have been completed for the purpose of ascertaining the character of the foundations required, detailed plans and specifications will be made ready for the advertisement of the work.

Plans and details have been made for introducing a system of trolley tracks and hooks in the Matadero and the installation of track scales therein.

The city boundary line has been relocated ready for introducing the necessary boundary stones from the Maytubig Creek through Singalong, Santa Ana, San Felipe Neri, and Santa Mesa to the Chinese cemetery. It is the intention of the office to complete the setting of boundary stones as soon as the services of the assistants can be spared for that purpose. The lengths of the various lines bounding the city will no doubt vary from those given in the act of the Philippine Commission establishing city limits, inasmuch as it appears from inquiry and examination of notes that no survey of this line has ever been made, other than a preliminary stadia traverse.

Surveys are now in progress by one field party for a new drainage

system for the city. The work in hand at the present time consists in establishing a system of street elevations and benches throughout the city, using as a basis for determining a datum mean low-tide level as obtained by the United States Coast and Geodetic Survey from observations for a period of two years.

A large amount of time has been devoted by the various survey parties in the engineering department in reestablishing building lines and setting corner stones throughout all parts of the city and in new subdivisions of land which have recently been made. Up to the present time no well-defined street lines have existed, and much difficulty has been experienced in giving lines for the erection of buildings.

Openings through the city wall and extensions of streets have been planned for Calles Aduana, Palacio, and Victoria. In making these openings and laying out the streets, the object has been to serve public convenience, obtain appropriate locations and grades for drainage, and mar the appearance of the wall as little as possible. Inasmuch as the only use of the moat at the present time is for surface-drainage purposes, it is believed that the same can be filled up after drains of suitable size have been substituted.

Expenditures of the department for the year.

Salaries and wages:	Mexican currency.
Classified employees	\$193,172.35
Unclassified employees	223,231.26
Ordinary labor	338,501.84
Total	<u>754,905.45</u>

Public works:	
Repairs to city bridges.....	25,711.67
Purchase and transportation of road material.....	113,948.48
Purchase of forage.....	72,263.64
Repairs to sewers and drains.....	17,918.97
Repairs to city stables and corrals.....	27,582.17
Purchase of coal for crematories, etc.....	22,120.02
Purchase of tools, hose, etc.....	18,194.81
Purchase of horseshoeing materials.....	4,883.66
Repairs to harness, wagons, and launches.....	24,927.38
Maintenance of grounds and parks.....	8,898.57
Maintenance of rock quarry.....	32,888.37
Repairs to Santolan road.....	3,833.50
Repairs, markets and municipal buildings.....	44,959.00
Supplies; cleaning and care public buildings.....	7,995.52
Maintenance of electric-light service.....	96,007.61
Repairs and increase to electric service.....	5,269.71
Oil for lights in public buildings.....	2,067.94
Maintenance of water service.....	137,559.33

Expenditures of the department for the year—Continued.

Public works—Continued.

Mexican currency.

Alterations and repairs to Arranque Market.....	\$3,591.60
Repairs to Bridge of Spain.....	11,093.03
Repairs to Santa Cruz fire station.....	3,576.22
Maintenance of city shops.....	40,341.24
Construction of school buildings.....	3,975.57
Hire of bull carts and drivers.....	27,001.45
Purchase of stone crusher.....	7,417.41
Supplies and materials for cemeteries.....	118.14
Construction of San Nicolas fire station.....	35,849.13
Construction of garbage crematory.....	144,425.15
Repairs to Paco police station.....	771.54
Construction of tenement houses.....	15,387.52
Construction of Anda Street Market.....	19,331.28
Construction of sews.....	18,324.08
Construction of new streets and roads.....	40,904.57
Construction of garbage scows.....	14,806.24
Purchase of means of transportation.....	48,983.97
Purchase of steam launch.....	14,630.00
Purchase of street sprinklers.....	14,864.72
Purchase of Matadero weighing machine.....	529.10
Repairs to crematories.....	2,219.75
Repairs to wharves.....	7,054.69
Veterinary supplies	2,163.10
Settlement of claim for lost bancas.....	2,400.00
Erection of buildings for city pound.....	1,554.00
Supplies and repairs to launches.....	5,730.47
Purchase of fire hydrants.....	15,272.17

Total 1,169,346.49

Contingent expenses:

Office supplies, advertising, etc.....	5,191.96
Official transportation	9,827.34
Burial of pauper dead.....	2,399.27
Rent of school houses, police stations.....	83,107.08
Rent of telephones.....	3,211.60
Clearing of grounds for new improvements.....	704.25
Block map of Manila.....	11,688.65
Per diem for United States Army city engineer.....	2,158.80
Purchase of Spanish block map of Manila.....	2,000.00
Subsistence supplies, Tondo fire sufferers.....	2,844.88
Incidentals	78.70

Total 123,212.53

Grand total 2,047,464.47

REPORT OF THE SEALER OF WEIGHTS AND MEASURES FOR THE FISCAL YEAR
ENDING JUNE 30, 1903.

Weights and measures sealed.

Name.	Character.	Number.
Cavanese	Dry	165
One-half cavan	do	187
Total		352
Arrobas	Liquid	78
One-half arroba	do	73
One-fourth arroba	do	67
1 liter	do	2
5 liters	do	1
10 liters	do	2
15 liters	do	4
Gallons	do	2
One-half gallon	do	1
Total		230
Gantas	Dry and liquid	2,617
One-half ganta	do	2,440
Chupas	do	3,642
One-half chupa	do	4,944
One-fourth chupa	do	4,951
Total		18,594
Spanish yard	Linear	1,660
Yards	do	100
Meters	do	21
6-foot measures	do	21
Total		1,802
Steelyards	Weight	2,080
Balance scales	do	231
Platform scales	do	161
Grand total		23,450

Collections.

Year and month.	Value. ¹
1902.	
July	\$50.35
August	38.25
September	48.75
October	49.30
November	44.45
December	16.15
1903.	
January	787.25
February	1,089.35
March	653.00
April	223.80
May	97.65
June	68.85
Total	3,167.15

¹ United States currency.

Measures rejected and destroyed.

Dry and liquid measures	822
Linear	174
Total	996

PROPOSED DRAINAGE SYSTEM.

Everyone who is familiar with and has been accustomed to modern sanitary arrangements, which are usually found in all large cities, will agree that the conditions existing in Manila offer a rare opportunity for sanitary investigation. The welfare and health of the city demand most of all a complete system of drainage, and no time should be lost in making the necessary surveys and preparing plans and estimates for the same, in order that the work of construction can be undertaken and carried to completion as quickly as possible. History in questions of this kind has demonstrated the fact that at best several years must elapse before a system of drainage of the magnitude required for this city, if undertaken at once, can be completed and made ready for operation.

The Department of Public Health and the Department of Engineering and Public Works are constantly besieged during the dry season with innumerable complaints due to the offensive odors arising from the foul and polluted moat and esteros, a condition which is undoubtedly growing worse each year at an alarming rate, and due almost entirely to the fact that the sewage matter from a large part of the population of the city is now dumped into these water courses, converting them into open sluggish sewers. With the discontinuance of this practice very much, if not all, of the objections to their existence will be removed. The open water courses or esteros will always remain the natural outlets for the purpose of handling surface drainage, but should never be used for any other purpose.

It will be necessary to design and build new such a system of sewerage as has usually been developed in other cities of similar size, by a gradual growth, extending through several generations. The system must be so designed as to afford not only adequate drainage for the present needs of the city but must also be so designed that the future needs of the city can be accommodated when it has attained possibly double its present size and population.

A discussion of the different methods of sewerage which have been adopted in different cities from time to time is quite unnecessary. The method of dry removal which was once thought the only proper system has been tried in Manila to a slight extent with not the most satisfactory results. In all large American communities accustomed to an abundance of water supply, and therefore dealing with large quantities of waste water or sewerage, the water-carriage system is considered the only satisfactory one by which the sewerage itself becomes the vehicle which immediately and continuously carries away from the inhabited districts both thoroughly and economically all refuse matter which can be held by it, either in solution or suspension.

Owing to the peculiar topographical features of Manila, where natural conditions for drainage are almost entirely wanting, due to the fact that

the highest parts are located at elevations of from 2 to 6 feet above mean high water in the bay, it will be necessary to create the fall by increasing the depths of the sewers, and for the sake of expense the question of minimum grades becomes of the utmost importance. Grades should be established in such a way as to insure efficiency and the satisfactory operation of the sewers.

As all of the sewage from the city will necessarily require pumping, and as some of it may have to be pumped twice or possibly three times, it becomes of the utmost importance, on account of the cost of maintenance, that the amount of sewage be reduced to a minimum, which can best be accomplished by adopting the separate system. By the separate system is meant a system of sewers admitting sewage only, allowing the storm water to flow off upon the surface of the streets to the near-by esteros and river, or providing for its removal by storm-water drains to the nearest water courses.

The older parts of the city are quite well provided with storm-water drains which have also received the drainage from a large number of dwellings and the overflow from cesspools, which connections of late years have been permitted to be made.

These storm-water drains have been constructed of rectangular blocks of stones, laid on the natural soil, with stone covering, and built in such manner as to be quite unsuitable for sanitary purposes. As these drains are very rough and uneven, and without suitable grades, a large amount of filthy matter is retained, which putrefies and gives off through the inlets or catch-basins odors which are extremely disagreeable, and most detrimental to the health of the citizens. No traps are provided at the catch-basins to prevent the escape of these foul odors, nor are the so-called sewers or drains ventilated except through the inlets. The existing storm-water drains should be made use of for the purpose of removing storm water only, which is the purpose for which they were originally constructed, and all house drainage should be disconnected from them as soon as independent sewer lines can be constructed and put in operation.

Storm-water removal is an entirely independent question, and one which is of minor importance and should be considered in connection with the canalization of the esteros after the introduction of the separate system of drainage. A complete review of the whole situation leads me to believe that a separate system of sewerage will be the best for the city of Manila, and it is believed that the wastes can be disposed of by means of a system of pumping stations, with two points of discharge, one located north and the other south of the Pasig River outlet, discharging the waste in its crude or unclarified form into the deep water of the bay at least 3,000 feet from shore, without any previous treatment, by means of submerged cast-iron pipes. At that distance from the shore the sewage would become so thoroughly and completely disintegrated by the action

of the waves that there would be little or no danger of its becoming offensive. All sewage, when sufficiently mixed with a large volume of water, is entirely inoffensive, and chemical changes at once begin to take place, which will in time purify the whole mass. This process of purification is not very rapid, but being a process of oxydization no offense is caused thereby. All floating material which would be likely to interfere with the pumps or afterwards strand along the shore of the bay will be caught and removed from the sewers by means of screens or filth hoists located at the pumps.

It is hoped that this office may be able to render a full and complete report, together with detail plans and an estimated cost of a complete separate drainage system for this city, along the lines outlined above, during the coming year, provided some slight additional engineering assistance can be secured to aid in carrying on the work.

In conclusion, I wish to express my appreciation of the active interest shown by the employees of this department in the execution of their work, and in the excellent results attained since I assumed the duties of City Engineer on January 1, 1903.

Very respectfully,

O. L. INGALLS,
City Engineer.

The MUNICIPAL BOARD, *Manila, P. I.*

REPORT OF CHIEF OF POLICE.

DEPARTMENT OF POLICE, CENTRAL OFFICE,
Manila, P. I., July 1, 1903.

SIR: I have the honor to submit the following report of operations of the Police Department for the fiscal year ending June 30, 1903:

PERSONNEL AND SALARIES.

These are the same as were submitted in report of last year. The different precincts of the city are commanded by the following officers: Precinct No. 1, Capt. Jack Dawson; Precinct No. 2, Lieut. Esrom J. Morse; Precinct No. 3, Lieut. Mark Scott; Precinct No. 4, Capt. George Seaver; Precinct No. 5, Capt. Jose de Crame; Precinct No. 6, Capt. Joaquin Monet; river and harbor, Capt. Walter E. Wilson.

BUILDINGS.

The buildings occupied by the Police Department as police stations are unsatisfactory and inadequate, it being absolutely impossible to put several of these buildings, or keep them, in a sanitary condition. A new building recently erected in Paco District, Precinct No. 6, was almost worthless as finished by the contractors and necessitated the expenditure of a considerable amount of money to put this building in a fit condition to be used, especially during the rainy season. A new station for Precinct No. 5 has been ordered and plans have been drawn for same.

I recommend that, if possible, a duplicate of this building but on a larger scale be constructed in Precinct No. 4, Sampaloc District, as the buildings now in use as stations in Sampaloc are not suitable and are very unsatisfactory; in fact, adequate stations are urgently required in Precinct 1, Subprecinct 1, Precincts 4 and 5. During the fiscal year buildings that were formerly used as police stations on Calles Ronquillo and Isla de Romero, respectively, were vacated and Third Precinct station removed to the central fire station in Santa Cruz, a private building being rented near by for the use of the native police of this precinct, which is also used as storerooms.

ALARM SYSTEM.

An improvement of most vital importance and interest of the Police Department was consummated when the Gamewell police and fire alarm system was installed. This is now in working order in four precincts.

This system is working very well, and when the additional materials which have been ordered from the United States, and which are badly needed, arrive, each precinct will be connected, and police work will be greatly facilitated. The Philippine Civil Hospital has also been connected with the central desk at Parian station and the ambulance from that institution is called in cases of emergency when the services of a physician are immediately required. The installation of this system prevents loitering on beat by patrolmen, indicates to the desk sergeant at all times where his men are, renders the work of men more systematic and thorough, is of the greatest benefit in calling for necessary assistance, reporting accidents, etc., and, in fact, keeps the station in touch at all times with every part of the precinct.

CIVIL SERVICE.

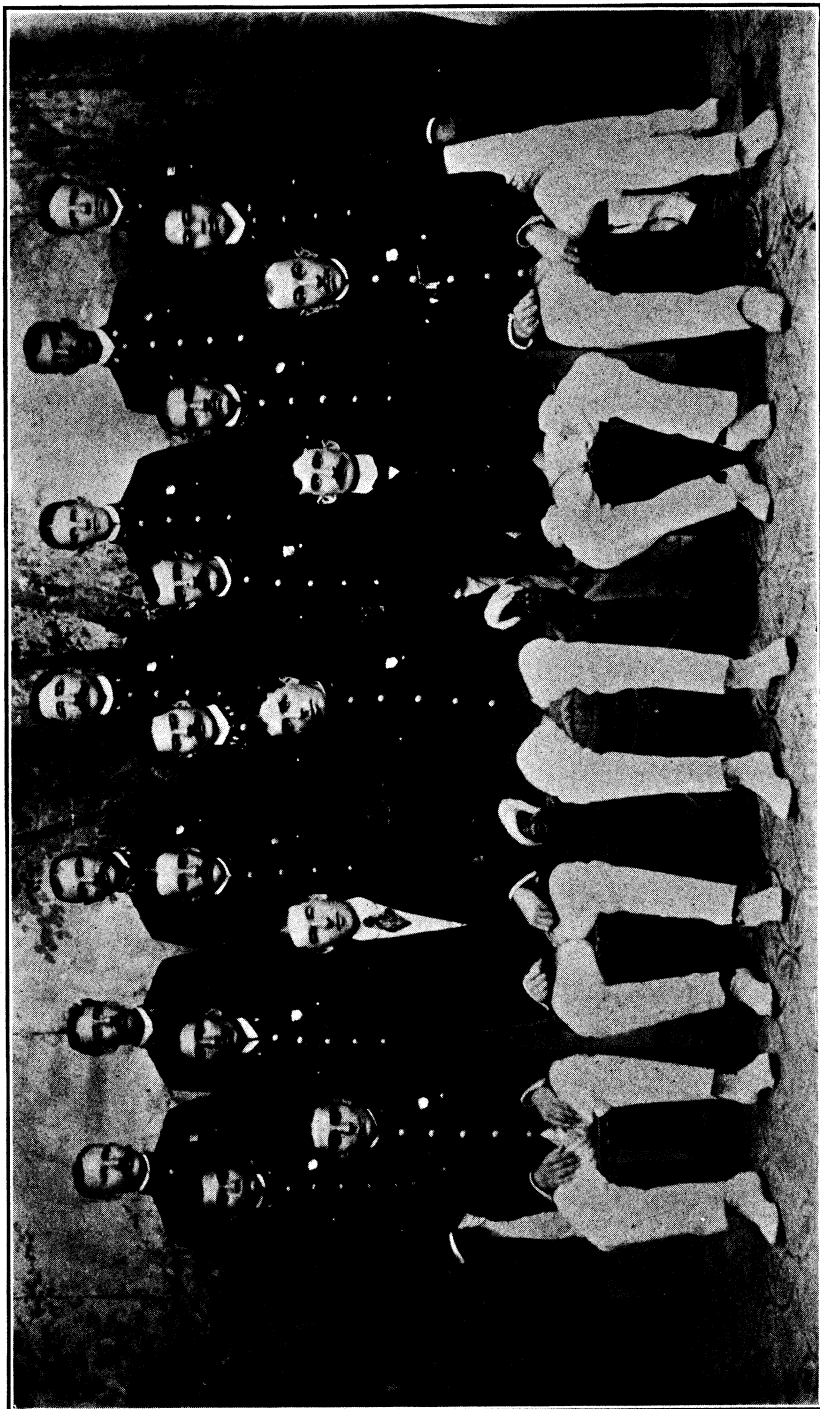
The entire department is now under the civil service, and on a whole this has been beneficial. All promotions are conducted by a board, composed of three police officers and one representative from the Civil Service Board. In this manner satisfactory results have generally been obtained. The Civil Service Board has been able, so far, to keep the Department supplied with new men. Some difficulty in this line will evidently be experienced in the coming year, due to the fact that with the reduction of the Army in the Islands good material will not be so plentiful and applications will come in rather slowly. The greatest benefit derived from the civil service is the leave of absence. At present, coöperation between the Police Department and the Civil Service Board is very good.

POLICE QUALIFICATIONS.

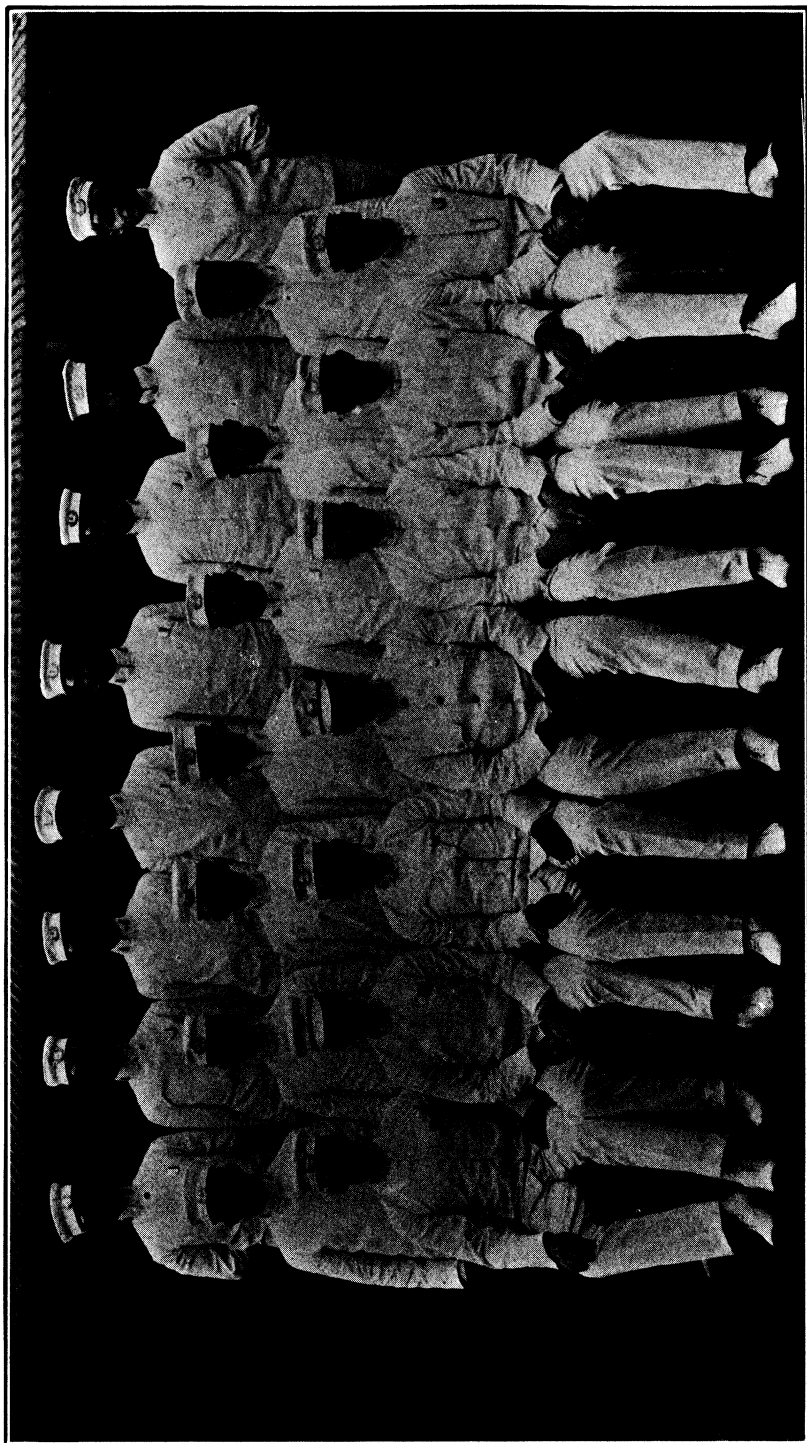
During the year the physical requirements for policemen were changed and the height reduced from 5 feet 9 inches to 5 feet 8 inches and the weight to 145 pounds, which has enabled a number of good men to enter the Department and has somewhat eliminated the scarcity of police material.

METROPOLITAN POLICE.

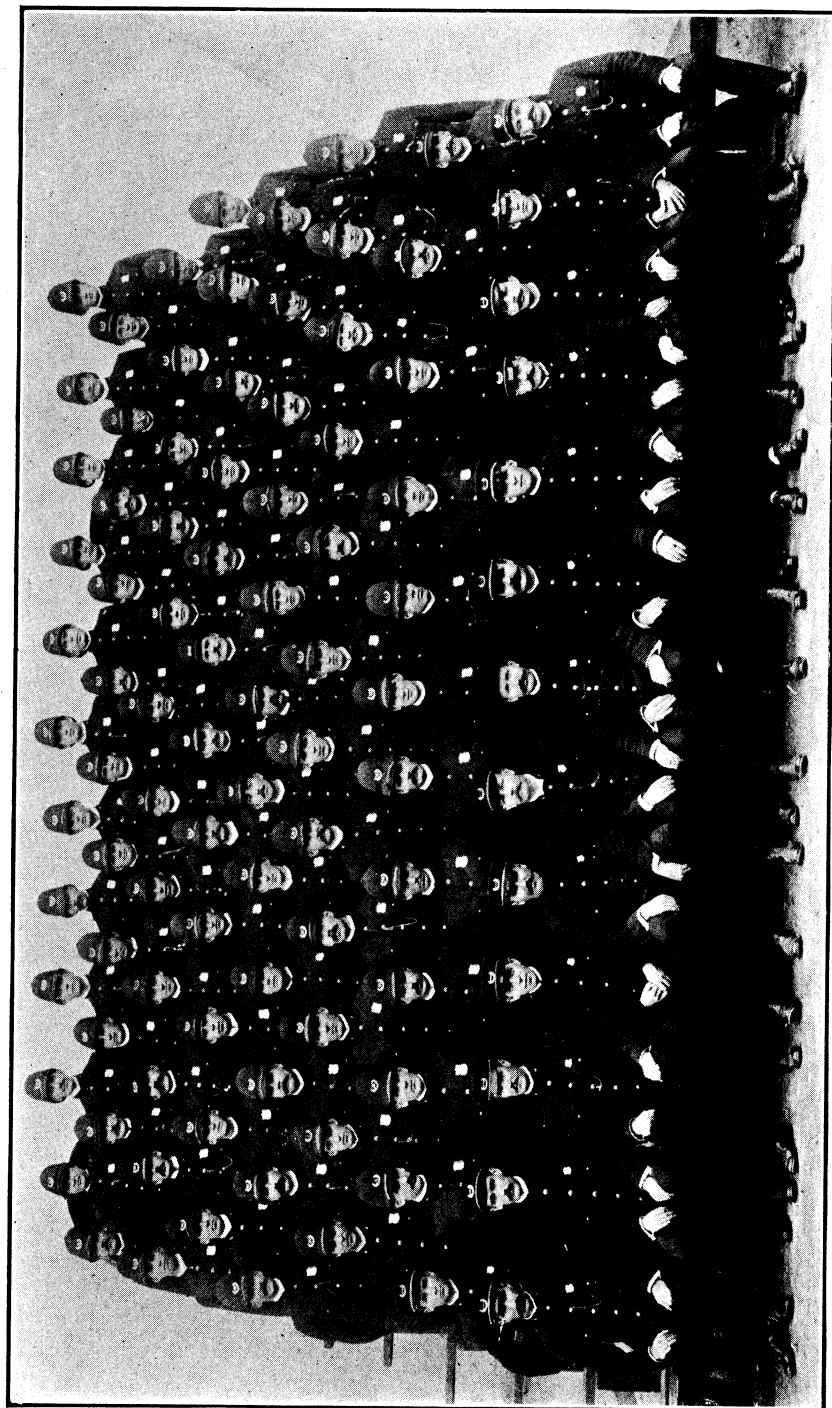
The high standard reported in the last annual report is still maintained in the Metropolitan police force. The number of complaints made by citizens due to the fact of the inexperience of the men and the new method of police administration with which the people were not familiar, has greatly diminished, and the efficiency of the force is probably greater than ever before. This high standard of efficiency is, however, rather difficult to maintain and calls for a large amount of work and the greatest of zeal on the part of the officers, owing to the fact of the large number of changes continually being made, as shown by the reports of appointments and resignations given in another part of this report. Conditions, however, are rapidly becoming more settled, and it is expected that the



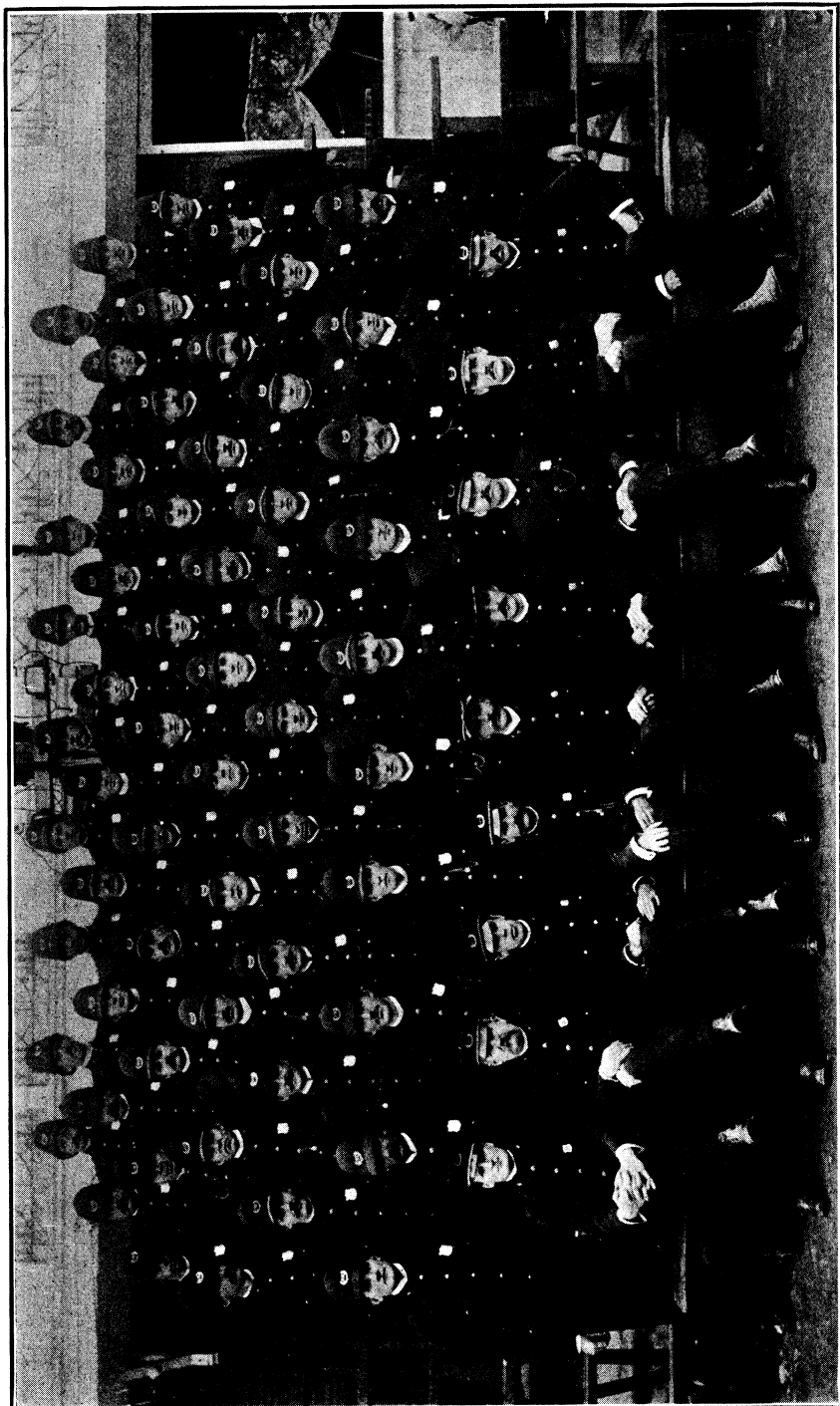
OFFICERS OF THE POLICE DEPARTMENT.



RIVER AND HARBOR POLICE.



AMERICAN POLICE, PRECINCT NO. 1.



AMERICAN POLICE, PRECINCT No. 4.

number of changes that will be made in the ensuing year will be much smaller. Only one case of theft or dishonesty has been discovered among the American patrolmen during the past year, and this point alone illustrates the high character of the men composing the force. Undoubtedly, their work can be favorably compared with that of any police department in the world.

NATIVE POLICE.

The good progress being made by the native police at the time of the last annual report is being continued. They are daily becoming more valuable to the city and their good work exceeds anticipations. They are rapidly learning the English language and acquiring a knowledge of the laws and police duties. They, however, require much more watching and more work on the part of their officers than the American police.

DETECTIVE BUREAU.

The detective bureau has developed in large strides and is daily becoming of more importance to the city, and the present conditions of the city are very largely due to their efforts. Their work during the past year can not be too highly estimated. Especial attention is invited to the report of Chief Trowbridge hereto attached, and to the recommendations made therein regarding rank in the department. These recommendations are fully concurred in by this office.

RIVER AND HARBOR POLICE.

The river and harbor police is another department which has rapidly developed in the importance and scope of its work. It has been very ably commanded by Capt. Walter E. Wilson. During the year an additional launch, the *George Curry* (so named after ex-Chief of Police Curry), has been added to this force. This is a small launch and is used for the purpose of patrolling the river from its mouth to the city limits. It has been of the greatest benefit to commercial interests in regulating traffic on the river. The large launch, the *Buckey O'Neill*, is used almost exclusively for bay work, making four patrols a day of the entire bay. This launch is very frequently called upon by the vessels in the bay for the purpose of making arrests, taking off injured persons, etc. It is recommended that a large pump to be used in case of fire be placed on this launch. It would be of great value in extinguishing fire among the shipping or along shore. The river and harbor police also patrol all of the many esteros in the city with rowboats, and where these esteros were at one time the scene of many crimes they are now comparatively peaceful.

MOUNTED DETACHMENT.

The mounted detachment under the command of Sergeant Henderson has rendered excellent services during the past year, and has aided greatly in cleaning out the ladrone element which formerly infested the district

surrounding "El Deposito." They have often been called upon to coöperate with the Philippines Constabulary stationed around and about that district and have greatly assisted them on many occasions. They have also regularly patrolled the north and northeastern limits of the city and have done considerable escort work, etc.

CITY POUND.

The city pound, in charge of a roundsman of this department, has done excellent service during the past year in impounding the cur dogs which infest the city. A great many other animals have also been handled by this department. The fee charged for the redemption of dogs is the same as that for other animals, and in most instances is considered too high, with the result that the dogs are not redeemed, but are killed and cremated. More than 3,000 dogs have been cremated during the past fiscal year. The revenue derived from the impounding of animals during this time amounted to \$334.04, United States currency, and \$1,731.74, Mexican currency. I would recommend that the pound fees for small animals such as dogs, pigs, goats, etc., be reduced to one-half the present rate, which is \$2 impounding fee and 50 cents a day for maintenance.

CLERICAL FORCE.

The clerical force during the past year has rendered very effective service, and the records of the department are up to date. There are at present 21 men in this department. The following is the list of salaries paid:

1 chief clerk, at \$1,800.....	\$1,800
6 clerks, at \$1,400.....	8,400
4 clerks, at \$1,200.....	4,800
2 clerks, at \$900.....	1,800
8 clerks, at \$600.....	4,800
Total	21,600

I recommend that this be changed as follows:

1 chief clerk, at \$2,000.....	\$2,000
1 assistant chief clerk, at \$1,600.....	1,600
1 clerk, at \$1,500.....	1,500
4 clerks, at \$1,400.....	5,600
3 clerks, at \$1,200.....	3,600
1 clerk, at \$1,000.....	1,000
1 clerk, at \$900.....	900
7 clerks, at \$600.....	4,200
Total	20,400

This will be a reduction of \$1,200 over the present salary list and I think will result in better service. In the past this department has experienced great difficulty in keeping competent and efficient men in the

clerical department, due to the fact that the salary list is not so regulated that a man can be advanced in proportion to his ability. With few exceptions, we have only been able to keep the best men a short time, as they transfer to other departments where larger salaries can be obtained. Under the new arrangement competent men can be promoted in accordance with their abilities, and will not be compelled to seek positions elsewhere. Under the provisions of Act 392 of the United States Philippine Commission, enacted April 18, 1902, a chief of a department can reduce the salary of a position at will, but can not increase the same beyond the appropriation. Under this new arrangement the maximum salary will only be given when men by their services have demonstrated that they deserve and are entitled to the same.

PATROL WAGON.

The department has only one patrol wagon at present, and this has rendered very effective service. A large number of calls have been answered and a number of lives saved by the prompt service rendered. The wagon in use at present is too cumbersome and heavy and is very hard on horses. A lighter wagon has been ordered and will arrive shortly, and the efficiency of the department in this line will be greatly increased.

ARMS.

The Police Department since its organization has carried .45-caliber Colt's revolvers, Army model. While this weapon is good, it is also very cumbersome, antedated, and old. Eight hundred new .38-caliber police revolvers have been ordered. This change will materially affect the appearance of the men, as the revolvers will be small enough to be carried in the pocket instead of being carried in a large and heavy holster as at present. As an emergency arm the police are now equipped with 300 Winchesters, repeating shotguns, short barreled, commonly known as a riot gun, which are very effective, carrying a buckshot shell and at close range are very deadly. From this standpoint the police are well equipped.

UNIFORM.

A new uniform has been selected for the Police Department, the cloth of which, an olive drab serge, has withstood every test made to determine its stability, shrinking qualities, and fast color. The uniform will be made in the same style as that at present in use and will be adopted about the first of the year. A cork helmet, which is a great improvement on the one at present used, has also been adopted and I am satisfied that the new uniform will prove satisfactory in every particular.

SCHOOLS.

The much extra work devolving upon the police during the past cholera epidemic and other unusual occurrences reduced the average attendance

at the night schools to the extent of the attendance falling below the necessary average of 25, and most of the schools were closed. At present a great part of the extra work of the above character has been removed and the average attendance required has also been reduced, and arrangements will be made to open up schools in each police station. The third-class police are very eager to learn the English language and take great interest in the work. There are at present about forty second-class policemen, a working knowledge of English being required before the men can enter this class.

PROMOTION OF OFFICERS.

Officers were promoted as follows: On January 9, J. E. Harding, promoted from assistant chief to Chief of Police; F. S. Luthi, from assistant inspector to assistant chief; John F. Green, from captain to assistant inspector October 23, George Seaver, from lieutenant to captain; February 4, Walter E. Wilson, from lieutenant to captain; October 23, Esrom J. Morse, from sergeant to lieutenant; January 7, Mark Scott, from sergeant to lieutenant; March 16, Thomas F. Crowley, from sergeant to lieutenant; December 1, Santiago Versoga, from sergeant to lieutenant.

RESIGNATIONS OF OFFICERS.

The following officers separated their connection with this department during the year, under the circumstances herein enumerated: Lieut. Bernabe de Malibot, resigned June 13, 1903; Capt. Andrew J. Burt, on leave of absence in the United States, discharged July 3, 1903; Lieut. Hilarion de Guzman, discharged for cause September 6, 1902; Lieut. H. G. Toone, discharged for cause December 18, 1902; H. W. Yemans, police surgeon, discharged for cause June 25, 1903; one officer, Capt. Ward P. Shattuck, is on leave of absence in the United States at the present time.

APPOINTMENTS AND SEPARATIONS OF PATROLMEN AND NONCOMMISSIONED OFFICERS.

During the year the following appointments, separations, etc., have occurred in this department:

Probational appointments	330
Discharges	325
Accrued leave of absence.....	362
Temporary appointments	50
Transfers from the department.....	16
Transfers to the department.....	5
Reinstatements	67
Promotions	72

CRIMINAL IDENTIFICATION.

The methods of criminal identification in use a year ago are still in vogue. A complete Bertillon system has been ordered and is expected to

arrive within a short time. This will enable the department to keep a line on all criminals arriving here from the United States and from other parts of the Orient, and will greatly facilitate the work in this line.

VAGRANTS.

A very undesirable, hard-to-cope-with element are the vagrants which infest the city, and in most cases are men who live off the gains of fallen women. During the past year this class of people have been hunted down, prevented from landing, driven out of the city, and sentenced to terms in Bilibid, and at the present time the city is practically without this undesirable class of people. This state of affairs is largely brought about through the efforts of the detective bureau. During the year 613 arrests were made under this charge. It is recommended that some arrangements be made whereby American criminals of this class can be forced to leave the Islands.

GAMBLING.

One of the most persistent, law-defying evils of the city is gambling, and during the past year the Police Department has been very earnest in its endeavors to suppress this vice. This evil still exists, principally among the Chinese population, and it seems to be almost an impossibility to entirely stop it. An index to the work of the department in this direction is furnished by a résumé of the court records for the year, which are as follows:

Arrested for conducting a gambling house.....	178
Conducting gambling games.....	39
Collecting for games.....	25
Gambling	3,604

Convictions were obtained practically in every case, and the revenue to the city was considerable.

POLICE FUND.

The police fund at the present time is in a very flourishing condition, and during the year has done much toward assisting members of this department. In all cases where members have died the burial expenses have been borne by this fund. Families of deceased policemen have also been assisted, and from the large amount of benefits derived from this fund in so comparatively small a way I feel assured that the police aid organization at present being contemplated would be of incalculable benefit to the members of this Department. At the end of the fiscal year this fund had a balance of \$1,745.68, Mexican currency.

HEALTH OF THE DEPARTMENT.

The general health of the department has been excellent during the past year, considering the various epidemics through which the city has passed and the nature of work performed. The number of cases of sick-

ness in the department during the year is 1,480, and the number of deaths 7. The unsanitary condition of several of the police stations must also be taken into consideration in this connection.

OFFICERS OF THE DEPARTMENT.

The entire staff of officers at present in the department are young, energetic men, and, while very few have had any previous experience in police work, the ability shown is of the highest order. The best of feeling and esprit de corps exists among the members of the department, and every one is working in hearty coöperation toward bringing the department up to the highest state of efficiency.

TRANSPORTATION OF PRISONERS.

During the past year the work of handling the prisoners of the Court of First Instance has been done by the sheriff of Manila, a police patrol wagon being turned over to him by this department for that purpose. The Police Department at present only handles Municipal Court prisoners.

CELLS.

This department is still greatly in need of proper cells at several of the police stations. Progress was made during the year in installing proper cells in stations of Precincts Nos. 3 and 6. The cells at the other stations are as yet constructed of wood, very insecure, and in most cases unsanitary.

RECOMMENDATIONS.

I urgently recommend that a plan for an increase of the salaries throughout the department be formulated and put into effect as soon as possible, that the proposed method of handling the police fund and plan of retired pay be also consummated as quickly as possible, as they are extremely essential to the stability of the force and to prevent the constant changes that are at present taking place.

I desire to take this opportunity of expressing my appreciation for the support and assistance that your honorable Board has rendered me in the performance of my duties during the year. It will be my desire in the future as in the past to at all times perform my duty and follow the instructions as provided by your honorable Board to the best of my ability.

In inclose herewith a statement of expenditures of this department during the fiscal year 1903, record of prisoners apprehended, report of the detective bureau, report of the storekeeper, and report of pound-keeper.

Respectfully submitted.

J. E. HARDING, *Chief of Police.*

The SECRETARY OF THE MUNICIPAL BOARD,

Manila, P. I.

DEPARTMENT OF POLICE, SECRET SERVICE BUREAU,

Manila, P. I., July 25, 1903.

SIR: I have the honor to submit the following report of operations of this bureau covering the fiscal year ending June 30, 1903:

The growth of various branches of the bureau's work during the period above mentioned has been greater than that of any space of time since the organization of civil government. This is particularly true of the strictly criminal branch of the work, and it is not too much to say that the entire time of the present detective force could be very comfortably taken up if devoted exclusively to this part of the work. The increase is undoubtedly due, for the most part, to the fact that the bureau is becoming better known, not only by the public at large but by the various Departments of the Civil Government, both in the city of Manila and throughout the provinces. Merchants and people of all classes, who, in times past, did not care to go to the trouble of investigations and trials subsequent, and who were not sure as to the best medium, now bring their reports to the bureau for the necessary action. This is evidenced not only by a marked increase in the amount and value of lost and stolen property recovered but by the continuous crowded condition of the office during the ordinary business hours.

With reference to the relation of this bureau to the various Departments of Civil Government, both executive and judicial, it may be said with truth that this work has almost tripled during the last year. Under this head come the following: First, the service of criminal papers for the sheriff for the city of Manila; second, the handling of that portion of the criminal work of the Constabulary division of information which pertains to the city of Manila; third, private and secret investigations of officials and employees, many of whom have had to be shadowed to prevent their leaving the Islands; fourth, actual documentary investigation in connection with various departments, including the summing up and reporting on cases referred by the Prosecuting Attorney; fifth, correspondence in and investigation of inquiries of lost and missing persons who have been either soldiers or civil employees in the Islands, the majority of which cases come either from the Executive Secretary or the Adjutant-General, Division of the Philippines.

In outlining briefly, as is done here, the increase of the work of the bureau, it is not to be understood that crime is increasing or has increased. The bureau has simply gained a reputation as a means of recovering lost and stolen property, running down criminals of all classes, furnishing accurate information on public matters, and rendering assistance in a multiplicity of cases, criminal and otherwise—in short, in handling work that formerly went by unnoticed, largely by reason of ignorance of the existence of the bureau.

The present force of the bureau is 28 men all told, of which 4 are de-

tailed from the uniformed force, 3 being Americans and the fourth a native. These details were found necessary several months ago, and are of a double advantage. These men so detailed are given the same class of work as those of the regular force, and in the meantime are receiving the benefit of instruction in the manner of work that comes from the actual handling of cases. This, of course, fits them to fill any vacancies that are occasioned in the regular force, and whenever possible appointments are made of these men in preference to outsiders, except in cases where the latter exhibit some particular fitness, either in speaking the languages in vogue, previous experience, or marked aptitude.

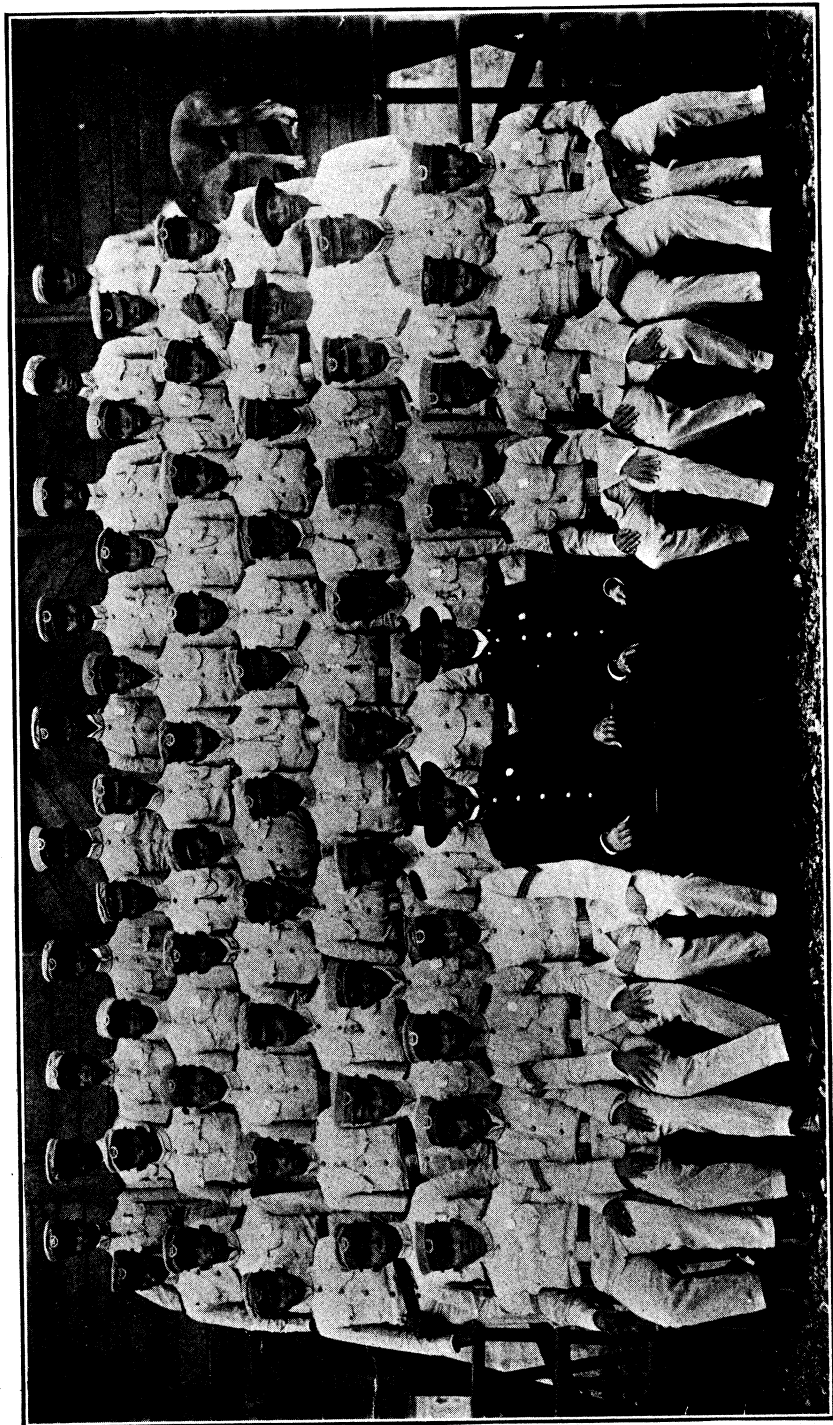
Under present arrangements several of the agents of the bureau are assigned to duty on particular lines of work, thus making them practically unavailable for assignment to cases. One agent of the bureau boards every incoming and outgoing steamer on which passengers arrive or depart. This not only keeps the bureau in touch with all new arrivals, be they good citizens or bad, but prevents a hasty departure on the part of peculating accountable officials and others.

A most valuable auxiliary to the bureau is the pawnshop inspection, which is a novelty as beneficial as it is thorough. This is operated under a city ordinance governing and regulating pawn agencies. One agent of the bureau is assigned to this work and makes thorough daily inspection visits to all the agencies. The propensity of the native to turn any ill-gotten article into ready cash by the hasty negotiation of a loan has caused many a one to spend a term in Bilibid and has been the means of recovering thousands of dollars' worth of jewels and other property.

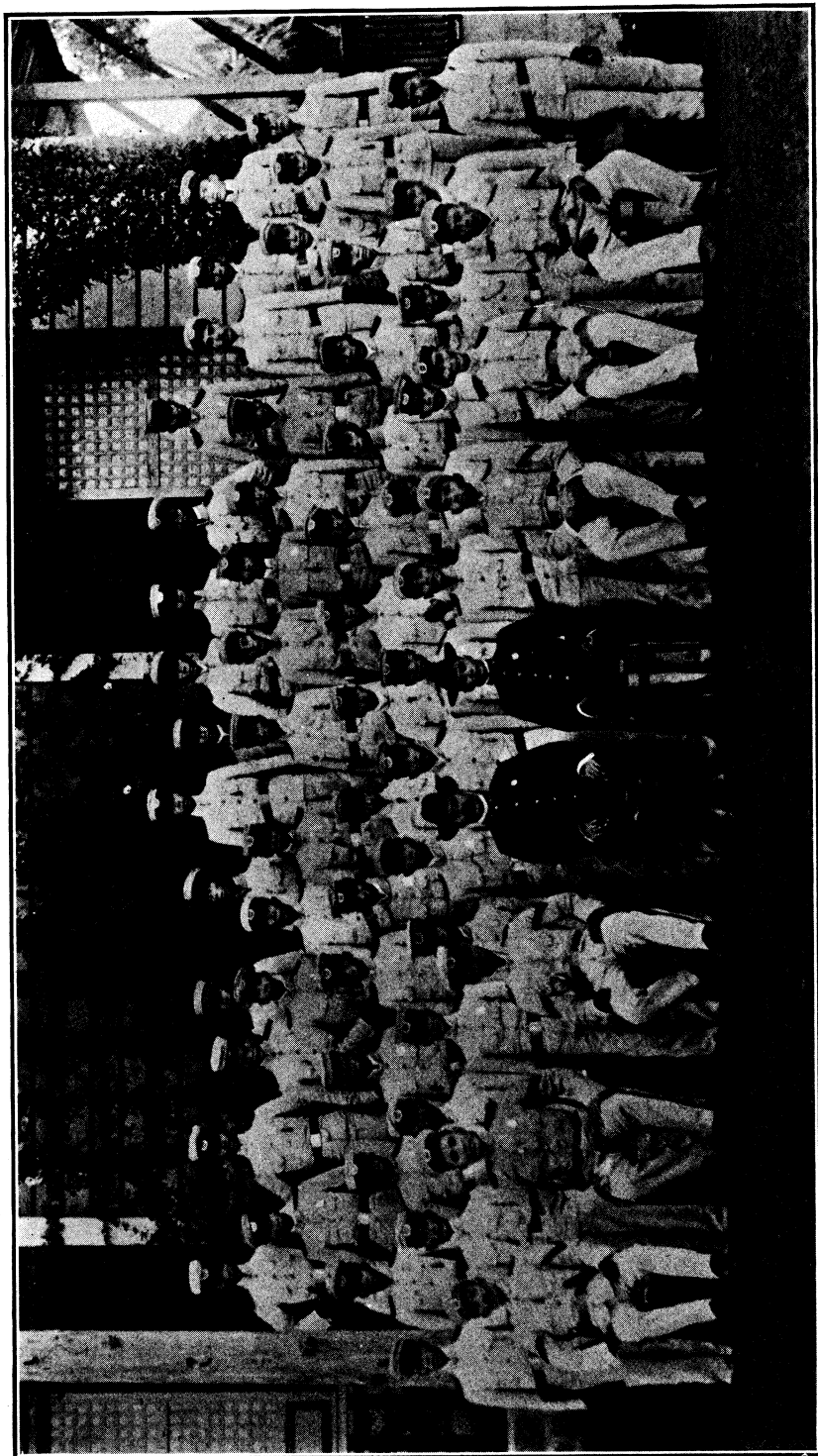
One agent of the bureau handles the identification of criminals and suspicious characters. The work embraces the protographing, measuring, and recording of every convicted criminal of any importance released from the public carcel of Bilibid, and all dangerous and suspicious characters. This agent is assisted in the work by one native detective, who does this in addition to his other duties.

One agent of the bureau is detailed in charge of the interior work of the office, and has charge of all details including the assignment of men, recording of cases, preparation of evidence—in fact, everything which pertains to the routine of the office. One agent of the bureau is detailed in charge of the office at night, and he is assisted by a native agent. He receives reports from the various police stations and attends to any complaints that may be made; he is in telephonic connection with many of the agents, who are obliged to respond promptly and willingly to his calls.

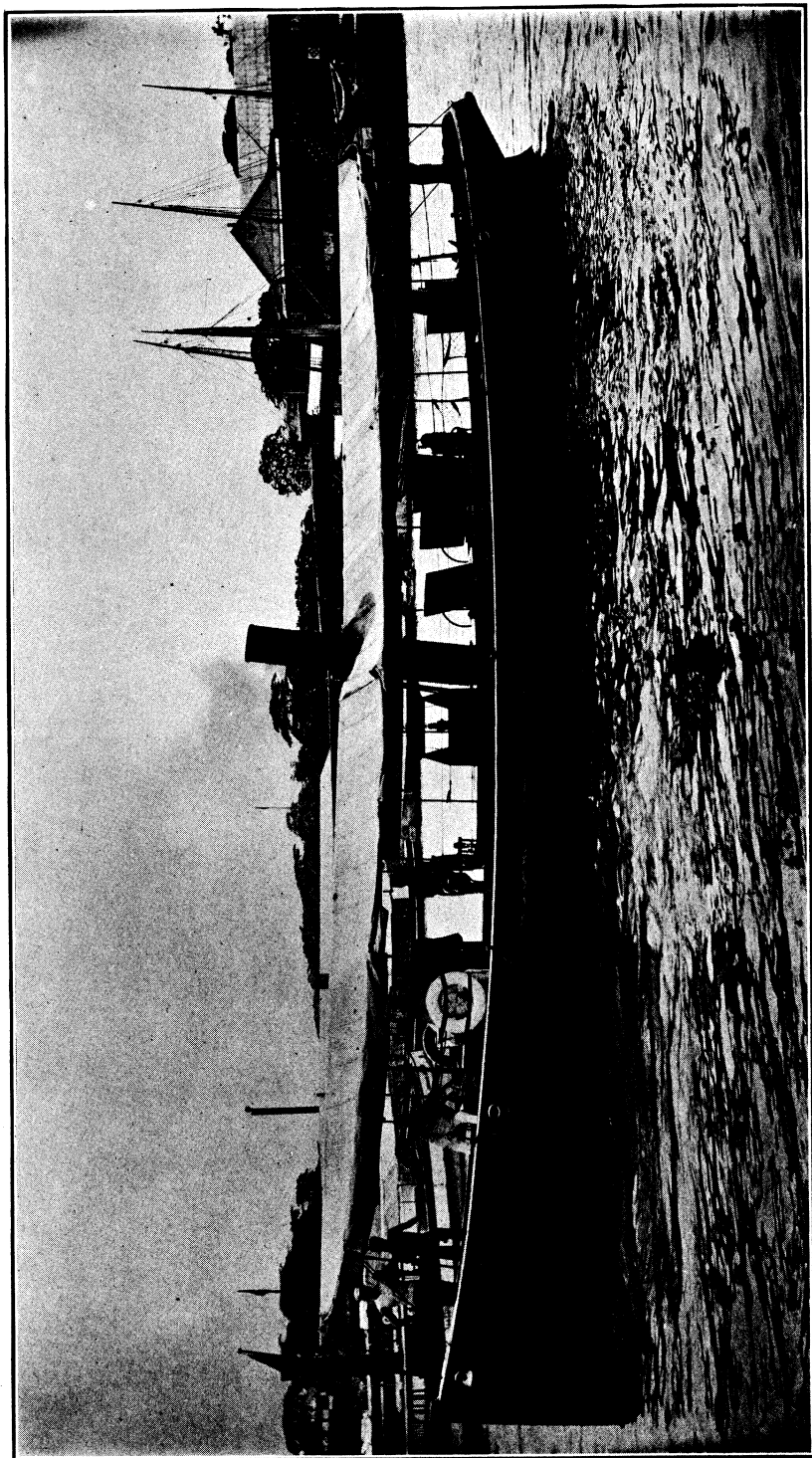
During the year 1,141 reports or “alarms” have been received of lost and stolen property. Each one of these has received due attention and a large percentage has been successfully worked out. These, it must be understood, cover cases of thefts and embezzlement only. There are perhaps hundreds of other criminal cases, such as rape, abduction, illegal



FILIPINO POLICE, PRECINCT No. 5.



FILIPINO POLICE, PRECINCT NO. 6.



POLICE LAUNCH BUCKEY O'NEILL.

marriages, etc., and many cases of missing persons and lost children. By reason of the fact that the object of the bureau is the prevention as well as the detection of crime, a large amount of work has been done which could not and does not show in the records.

Statement of money and money value of articles recovered by the detective bureau from July 1, 1902, to June 30, 1903.

Month.	Money. ¹	Money value of articles. ¹	Total.
1902.			
July	\$235.00	\$2,664.50	\$2,899.50
August	1,950.70	3,944.97	5,895.67
September	554.73	2,894.17	3,448.90
October	364.41	2,914.74	3,279.15
November	2,479.90	1,107.10	3,587.00
December	3,666.35	2,031.25	5,697.60
1903.			
January	898.00	1,738.00	2,636.00
February	87.00	2,442.80	2,529.80
March	1,025.80	3,827.01	4,852.81
April	1,299.25	2,295.10	3,594.35
May	728.00	11,964.25	12,692.25
June	3,367.35	1,013.93	4,381.28
Total	16,656.49	38,837.82	55,494.31

¹ Mexican currency.

Following is a statement of the number of arrests made by the bureau and their disposition from July 1, 1902, to June 30, 1903, inclusive:

Number of arrests.....	1,842
Convicted	1,204
Dismissed	117
Acquitted	7
Released	242
Jumped bond	1
To proper authorities.....	220
Held as witness	4
Committed suicide	1
Escaped	5
Charges withdrawn	3
Cases pending June 30, 1903.....	38
Total	1,842

On June 30, 1902, there were pending seven cases, which were disposed of as follows:

Convicted	5
Dismissed	2
Total	7

During a portion of the year, and especially during the last few months,

the work of the bureau has been crippled by a lack of clerical help, this work, of necessity, having kept step with the increase in other lines.

During the month of August, 1902, numerous gambling houses were started and were running and flourishing in the various precincts of the city. By your orders a vigorous campaign was instituted against these, with the result that the districts of Binondo and Santa Cruz, which seemed to be the most thickly infested, were pretty thoroughly cleaned out. This work can be done much more effectively by the bureau than by the precinct people for the reason that the plain-clothes men of the precinct become so well known in their particular jurisdiction that their work is seriously hampered. However, on account of the great amount of more important work on hand, the bureau is not particularly active in this line at the present, but all reports received of games running in any precinct are at once transmitted to the precinct commander for his information.

Statement of games, number of persons arrested, fines, and confiscations during the period from July, 1902, to June 30, 1903.

[Amounts stated in United States currency.]

Month.	Number of persons arrested.	Fines.	Confiscations.	Total.
1902.				
July	13	\$173.00	\$3.07	\$176.07
August	2	100.00		100.00
September	9	650.00	38.00	688.00
October	23	1,051.00	594.00	1,645.00
November	79	3,133.00	679.26	3,812.26
December	87	725.00	32.90	757.90
1903.				
January	162	1,339.50	312.24	1,651.74
February	91	2,766.00	726.95	3,492.95
March	75	1,526.00	88.48	1,614.48
April	28	635.00	19.81	654.81
May	71	848.00	282.22	1,130.22
June	55	669.50	26.98	696.48
Total	695	13,616.00	2,797.91	16,419.91

During the year past the bureau has handled a goodly number of cases semipolitical in nature, the most important of which was that involving the affairs of the organization known as La Union Obrera Democratica and its president, a Spanish-mestizo physician named Dominador Gomez de Jesus. In this case the bureau rendered assistance to the Attorney-General, the Solicitor-General, the Insular Treasurer, and the Prosecuting Attorney of Manila, not only in the injunction proceedings which were instituted against the organization but in the criminal charges against Dr. Gomez. Attention was also given to the matter of the seditious dramas which were being presented in the city, and in fact the initial steps to suppress this evil were taken by this bureau. Investigation of other

restless factions, such as labor leaders, religious disturbers, etc., has been conducted and an endeavor has been made to keep the finger of the bureau at all times upon the pulse of Manila's populace, the latter being regarded as a criterion in matters political.

Coöperation with the division of information of the Philippines Constabulary has increased materially during the year and not a day passes without the transaction of business matters, either criminal or political. This coöperation is of mutual benefit, and attention is invited to the uniform courtesy and accommodation that has been accorded this bureau by the Chief of the Constabulary and the superintendent of the division of information. Work done for and with the military authorities, which was formerly an important branch, has been greatly reduced and is now of minor importance.

The city of Manila has, mainly through the efforts of the bureau, been practically cleared of the worthless American element which formerly infested it. A body blow was given to this element when the so-called gang headed by the notorious S. R. Price and consisting of gamblers, confidence men, ex-Alaska adventurers, and ex-convicts was compelled to seek more congenial climes. Some of these went to South Africa, others to China, some to the States, while a few still languish in Bilibid.

Some few months ago the quarters of the bureau were changed from the old Provost-Marshall-General building to the Municipal School building on Calle Victoria. The new quarters, while more comfortable so far as light and ventilation are concerned, are very cramped, and this is a serious hindrance to good and effective work. The most important recommendation to be made in this report is that more commodious quarters be secured as soon as possible.

Without in any manner reflecting on the precinct commanders of the city, I would respectfully invite your attention to the necessity of a more thorough and complete coöperation with this bureau. It has always been the case that reports from police stations have been given precedence in importance over other matters, and I regret to state that in several instances tardiness in such reports has caused delay in bringing matters to a successful issue here in the bureau. Agents of this bureau have been repeatedly instructed, and it is my belief that a great many are following out the instructions, to cultivate a feeling of friendship and fraternity with the uniformed force, officers, noncommissioned officers, and patrolmen. Wherever practicable and especially where police assistance is likely to be invoked, precinct commanders are consulted, and I speak for the whole bureau when I here express heartfelt gratitude for their coöperation.

In connection with the last recommendation I have the honor to suggest, rather than recommend, that it will be beneficial to the bureau and to the Police Department to so amend the present police regulations as to

give the American portion of the detective force, including the chief, a rank in the department. As matters now stand coöperation of police officers and patrolmen has become more or less a matter of courtesy. In my last annual report I recommended that the American agents of this bureau be given the rank of sergeants of police, thus giving them authority over patrolmen who might be on duty, which would bring them in contact with the detective. I now respectfully suggest the following: That the senior American detective be given the rank of captain, that the second senior American detective be given the rank of lieutenant, and that all other American detectives be given the rank of sergeant.

This arrangement will serve to give the members of the bureau a fixed status in the department and will go far toward making the detective bureau appear what it really is, namely, a part of the Police Department.

Very respectfully,

C. R. TROWBRIDGE,

Chief of the Secret Service.

The CHIEF OF POLICE,

Manila, P. I.

DEPARTMENT OF POLICE, CENTRAL OFFICE,

Manila, P. I., June 30, 1903.

SIR: I have the honor to make the following report of the work of the storekeeper's office for the fiscal year 1903:

A complete list of property on hand at the close of the fiscal year 1903 was submitted by me to the Chief of Police on the 8th instant and was forwarded by him to the secretary of the Municipal Board for record, a duplicate being placed on file in the office of the Chief of Police.

By comparing this list of property with my report of June 30, 1902, it can readily be seen that the property of the Police Department has increased considerably, both in quantity and in value, during the past twelve months. The most important addition has been the Gamewell police telegraph apparatus, which represents an expenditure of \$42,460, United States currency, for the original equipment and \$1,015.63, United States currency, for additional appliances.

An additional launch, the *George Curry*, has been placed on police papers, and twenty complete outfits of cavalry equipment have been added for the use of the mounted police.

The Secret Service Bureau has been given almost an entirely new outfit of office furniture and three large file cases have been added to the office of the Chief of Police. Four American horses and four Chinese ponies have been added to the equipment of the mounted police, and two native ponies and a dog catcher's carretela have been placed at the city pound

for use in collecting stray animals. Another native pony and carretela have been placed at Paco station to be used between that station and the substation at Santa Ana. The two police launches, in addition to their large amount of oils and other expendable materials, have received many articles of permanent equipment, such as ship's compass, ship's clocks, chairs, flagstuffs, awnings, ship's lanterns, and sidelights.

During the fiscal year just completed the sales department of the storekeeper's office has not been able to close out its entire stock, since the demand for the articles still on hand is not very large.

On July 1, 1902, there had been sold up to date since January 1, 1902, when the sales began, the following amounts of uniform material:

Blue serge cloth.....	yards....	2,364 $\frac{1}{2}$
Canamo	varas....	7,995 $\frac{1}{2}$
Blue trimming cloth.....	do.....	224
Caps	number....	41
Collars	do.....	231
Shoes, russet	pairs....	313
Cuffs	do.....	42
Chevrons, sergeant	do.....	4
Chevrons, corporal	do.....	8
Buttons, large	number....	356
Buttons, small	do.....	369

The above sales represent \$10,539.66, Mexican currency, which amount was turned over by me to the Insular Treasurer as a refund to the city of Manila.

These sales left a balance on hand on July 1, 1902, of the following amounts:

Blue serge cloth.....	yards....	32 $\frac{3}{4}$
Canamo cloth	varas....	2,537 $\frac{1}{2}$
Blue trimming cloth.....	do.....	14 $\frac{3}{4}$
Caps	number....	559
Collars	do.....	769
Shoes, russet	pairs....	187
Cuffs	do.....	958
Chevrons, sergeant	do.....	146
Chevrons, corporal	do.....	142
Buttons, large	number....	1,894
Buttons, small	do.....	2,331

During the period from July 1, 1902, to June 30, 1903, inclusive, the sales of uniform materials have been as follows:

Blue serge cloth.....	yards....	32 $\frac{3}{4}$
Canamo cloth	varas....	2,537 $\frac{1}{2}$
Blue trimming cloth.....	do.....	14 $\frac{3}{4}$
Caps	number....	249
Collars	do.....	769

Shoes, russet	pairs....	187
Cuffs	do.....	487
Chevrons, sergeant	do.....	24
Chevrons, corporal	do.....	27
Buttons, large	number....	1,894
Buttons, small	do.....	2,331

These sales represent \$3,400.83, Mexican currency, which amount has been turned over by me to the Insular Treasurer as a refund to the city of Manila, with the exception of \$52.31, Mexican currency, which is the amount of the collections for June, 1903, and which will be turned over to the Treasurer on July 11, 1903.

The balance of uniform material left on hand at the close of the fiscal year June 30, 1903, is as follows:

Caps	number....	310
Cuffs	pairs....	471
Chevrons, sergeant	do.....	122
Chevrons, corporal	do.....	115

The value of these articles now on hand is \$886.34, Mexican currency. When these articles shall have been sold and their money value of \$886.34, Mexican currency, shall have been deposited with the Insular Treasurer, that official will have received \$14,826.83, Mexican currency, as a refund from the city of Manila for an expenditure of \$14,765.46, Mexican currency, which was incurred by the Department of Police through an act of appropriation by the Civil Commission. The Treasury will then be gainer to the extent of \$61.37 when the sales are completed.

During the past fiscal year the number of articles in the assortment of lost, stolen, confiscated, and deposited goods has almost doubled, the entry numbers now reaching nearly 800. The increase in this direction is due largely to the depositing of firearms, by reason of a recent act of the Civil Commission. There are now on deposit in this office at least 250 firearms for safe-keeping, for which there will probably never be obtained any permit and which will be here on the shelves until the owners either go to the United States or to some foreign country.

Although the storeroom has been used as a depository for a large portion of the pound receipts and the cohero receipts, it would hardly be in the province of the storekeeper to make an itemized report of these deposits, since they do not represent the entire amounts collected and were merely left in the storeroom as a place of safe-keeping.

The police fund, however, is directly under the supervision of the storekeeper, who acts as custodian and collector of fines, and the following is a consolidated report of that fund from July 1, 1902, to June 30, 1903, inclusive:

Receipts and disbursements of police fund during fiscal year 1903.

[Amounts stated in Mexican currency.]

Month.	Receipts.	Expenditures.	Balance on hand.
1902.			
July 1			\$198. 19
July 1-31	\$484. 37	\$411. 35	271. 21
August 1			
August 1-31	464. 26	674. 21	61. 26
September 1			
September 1-30	497. 75	495. 65	63. 36
October 1			
October 1-31	504. 90	547. 20	21. 06
November 1			
November 1-30	348. 00	170. 68	198. 38
December 1			
December 1-31	194. 80	50. 00	
1903.			
January 1			343. 18
January 1-31	480. 70		823. 88
February 1			
February 1-28	404. 20	200. 00	1, 028. 08
March 1			
March 1-31	535. 90		1, 563. 98
April 1			
April 1-30		170. 00	1, 393. 98
May 1			
May 1-31	198. 50		1, 592. 48
June 1			
June 1-30	343. 20	190. 00	1, 745. 68
June 30			
Total receipts during fiscal year			\$4, 456. 58
Total expenditures during fiscal year			2, 909. 09
Increase of police fund			1, 547. 49

The present storeroom for police property is exceedingly cramped for space, but can be made to serve for a few months pending the assignment of the department to more commodious quarters, in which it is hoped the storekeeper will be allowed the equivalent of four large storerooms and a suitable office, where visitors will not have convenient access to every item on the shelves, as they had and have taken in the past.

The monthly accounts-current for the past year are all on file with the Auditor and have been audited and approved as far as to include December 31, 1902. The account-current for June, 1903, and the property return for the quarter ending June 30, 1903, are now in process of preparation and unless some unforeseen event arises will both be placed in the Auditor's hands by July 10, 1903.

Respectfully submitted.

BENJ. P. LUKENS,

Storekeeper, Department of Police.

The CHIEF OF POLICE,

Manila, P. I.

MANILA, P. I., *July 31, 1903.*

SIR: I have the honor to submit herewith receipts of the city pound for the fiscal year ending June 30, 1903:

Month.	Amount of fees.		Amount deposited to credit of owner from sale.	
	United States currency.	Mexican currency.	United States currency.	Mexican currency.
1902.				
July	\$48. 50		\$28. 04	
August	10. 00			
September	14. 50	\$81. 09		
October	7. 50	60. 20		
November		207. 13		
December	9. 75	376. 85	11. 75	\$79. 20
1903.				
January	12. 50	68. 25		
February	27. 50	203. 42		23. 47
March	17. 50	202. 38		
April	22. 50	234. 21		11. 00
May	52. 00	165. 55		
June	113. 00	121. 62	58. 10	
Total	335. 25	1,720. 70	97. 89	113. 67

Very respectfully,

W. C. McCOLLEY,

*Poundkeeper.*The CHIEF OF POLICE, *Manila, P. I.**Statement of expenditures, Department of Police, during the fiscal year 1903.*

Item.	Fiscal year 1903.	Supplemental to fiscal year 1903.	Total.
Salaries and wages:			
Exclusive of special police.....	\$1,307,609.58	\$4,869.90	\$1,312,479.48
Special police	24,231.24	20,614.89	44,846.13
Total salaries and wages.....	1,331,840.82	25,484.79	1,357,325.61
Equipment:			
Disbursed by municipal disbursing officer.....	3,232.58		
Purchased from Insular Purchasing Agent.....	115,637.93		
Total equipment.....	118,870.51	31,783.80	150,654.31
Contingent expenses:			
Disbursed by municipal disbursing officer.....	22,596.36		
Purchased from Insular Purchasing Agent.....	24,987.08		
Total contingent expenses.....	47,583.44	6,714.90	54,298.34
Grand total	1,498,294.77	63,983.49	1,562,278.26

Report of prisoners apprehended by Police Department from July 1, 1902, to June 30, 1903, inclusive.

Charge.	Num-ber.	Charge.	Num-ber.
Assault	205	Fraud	25
Assault and battery	35	Forgery	11
Attempted rape	19	Frustrated assault	1
Attempted murder	10	Fast riding	19
Abandon vehicle	146	Frustrated rape	1
Abduction	10	False measures	1
Attempt to kill	4	Frustrated theft	1
Absent without leave	3	Falsification of public documents	1
Attempted robbery	6	False accusation	2
Attempted bribery	4	Gambling	3,604
Adultery	9	Grave injury	1
Attempted housebreaking	1	Grave assault	4
Attempted assault	1	Giving false testimony	1
Aggravated assault	3	Held for safe-keeping	27
Attempted burglary	3	Held as a witness	8
Assault with intent to kill	14	Housebreaking	7
Accessory to theft	3	Held by order of Prosecuting Attorney	8
Aiding a prisoner to escape	3	Held awaiting warrant	112
Attempted larceny	1	Held by order of Chief of Secret Service	30
Attempted abduction	2	Held by order of the sheriff	3
Accessory to murder	1	Held by order of the Cour of First Instance	4
Attempted theft	2	Held on provincial warrant	6
Accessory to robbery	1	Held awaiting warrant from the Court of First Instance	6
Attempt to send in a false alarm of fire	2	Highway robbery	7
Arson	2	Held for the Constabulary	1
Absent without leave from the United States Navy	1	Held for the Board of Health	3
Accomplice to forgery	1	Harness in bad repair	1
Accomplice in rape	1	Held on political charges	1
Burglary	11	Held for deportation to Spain	1
Bribery	18	Held for the Court of Customs Appeals	1
Blocking a highway	854	Held for warrant	37
Blocking a canal	24	Illegal detention	17
Blocking the sidewalk	152	Insane	14
Begging	3	Impersonating an officer	18
Blocking the Pasig River	3	Indecent exposure	59
Billposting without a license	1	Injuries	2
Ry order of the superintendent of the insular lumber yard	2	Interfering with an officer	13
Brigandage	3	Impersonating a sanitary inspector	2
Bigamy	1	Insulting an officer	5
Cruelty to animals	441	Impersonating a Secret Service officer	3
Cochoero not registered	672	Illegal change of name	1
Carrying concealed weapons	19	Illegal threats	1
Coolie occupying the sidewalk	82	Illegal use of the fire-alarm system	2
Conducting a house of prostitution	3	In possession of arms without proper authority	1
Conducting a gambling house	178	Insubordination	1
Conducting a gambling game	39	Illegal marriage	4
Collector for a gambling game	25	Interfering with sanitary inspector	1
Criminal negligence	3	Katipunan	2
Contempt of court	15	Keeping a vicious dog	1
Cock fighting on public street	52	Larceny	600
Counterfeiting	3	Ladrones	3
Cutting grass without permission	7	Leper	4
Conspiracy	1	Murder	21
Corruptor of youth	3	Misdemeanor	3
Detention	135	Held for investigation	170
Drunk	173	Mutiny	3
Drunk and disorderly	815	Mayhem	1
Disorderly conduct	1,956	Nuisance	304
Disobeying an officer	98	No lights on vehicle	127
Deserting passengers	4	No license for vehicle	320
Driving on Escolta during prohibited hours	16	No signal on vehicle	203
Driving from the rear seat of a carromata	18	No tariff card in vehicle	79
Deserter from United States Army	14	No number on vehicle	29
Deserter from United States Navy	5	No number on lamps of vehicle	4
Defacing public property	21	No light on cart	3
Deserter from the Philippines Constabulary	2	No light on bicycle	4
Destroying private property	1	No badge on cochoero	52
Escaped prisoner	54	Not occupying public station	442
Embezzlement	130	No license for bicycle	9
Extortion	7	No license card in vehicle	31
Ear cleaning on public street	4	Neglect of duty	1
Elopement	1	No light in front of house	60
Fast driving	451	No dog license	12
Frustrated murder	4	No number on cart	2
		Overcharging a fare	15
		Obtaining money under false pretense	1

Report of prisoners apprehended by Police Department, etc.—Continued.

Charge.	Num-ber.	Charge.	Num-ber.
Overloading a vehicle.....	2	Suspected of theft	2
Obscenity	2	Theft	452
Peddling without license	70	Tampering with the fire-alarm system	5
Perjury	1	Threatening to kill	8
Passing illegal money	5	Threats	7
Passing Confederate bills	2	Trespassing	4
Pickpocket	1	Usurpation	1
Passing counterfeit money	1	Unlawful disposal of a dead person	1
Prostitutes	8	Unlawful mooring to bridges	1
Practicing medicine without license	1	Unlawfully engaged in dangerous trade	1
Receiving stolen goods	4	Unlawful cutting off of electric current	2
Robbery	74	Unlawfully practicing medicine	5
Refused a fare	244	Unlawful keeping of firearms	4
Resisting arrest	5	Vagrancy	613
Resisting an officer	24	Violation of—	
Malfeasance in office	1	Building regulations	208
Reckless driving	88	Excise laws	37
Refused to be vaccinated	5	License regulations	442
Rape	21	Sanitary regulations	360
Refused to pay cochero	3	Street-advertisement regulations	9
Reckless negligence	10	Lodging-house regulations	14
Refusing to supply electric current	5	Quarantine regulations	370
Reckless riding	2	Pound regulations	1
Suspicious character	14	Vehicle regulations	19
Suspected of poisoning	2	Park regulations	13
Suspected of murder	1	Barber regulations	67
Suspected Katipunán	2	Customs regulations	1
Shooting at an officer	1	Water-supply regulations	1
Selling without license	70	Explosive-storage regulations	4
Selling impure food	2	Warrant from—	
Soldier out of quarters after hours	1	Municipal Court, north of the Pasig	24
Suspected insane	5	Municipal Court, south of Pasig	35
Swindling	1	Constabulary	12
Sedition	13	Court of First Instance	33
Sedition	1	Sheriff	2
Selling vino to soldiers	3	Prosecuting Attorney	6
Selling Government property	2	Municipal Court	151
Selling prohibited food	1		
Stowaway	1	Grand total	17,518

RECAPITULATION.

BY SEX.

Males	15,332
Females	2,186
Total	17,518

BY NATIONALITY.

Americans	1,455
Spaniards	65
Natives	13,310
Chinamen	2,557
Europeans	68
Japanese	55
Africans	2
Indians	6
Total	17,518

BY SERVICE.

Enlisted men of United States Army	145
Enlisted men of United States Marine Corps	2
Enlisted men of United States Navy	11
Total	158

BY STATIONS.

Detective Bureau	1,843
Parian station Precinct No. 1	2,002
San Fernando, river and harbor police	715
Anloague station, Precinct No. 2	3,460
Santa Cruz station, Precinct No. 3	2,829
Sampaloc station, Precinct No. 4	1,648
Tondo station, Precinct No. 5	2,183
San Lazaro substation, Precinct No. 5	567
Paco substation, Precinct No. 6	766
Malate substation, Precinct No. 1	505
Total	17,518

REPORT OF THE LAW DEPARTMENT.

CITY OF MANILA, OFFICE OF THE CITY ATTORNEY,
Manila, P. I., July 1, 1903.

SIR: I have the honor to submit the following report of the operations of the Law Department of the city for the fiscal year ending June 30, 1903:

OFFICE OF CITY ATTORNEY.

Investigations, generally among the old Spanish insular and municipal archives and resulting reports to the Municipal Board and the various city departments	79
Legal opinions rendered to the Municipal Board and various city departments (these are written opinions; in addition numerous oral opinions have been rendered concerning matters of current business.....	175
Ordinances prepared for the action of the Municipal Board.....	44
Acts prepared for the action of the Philippine Commission.....	12
Bonds, contracts, deeds, leases, etc., prepared and submitted to the Municipal Board	78
City land titles cleared and registered.....	8
Suits attended to.....	36
Letters sent	611
Letters received	599

During the year the following changes have occurred in the official personnel of the office:

On April 8 Modesto Reyes, former Assistant City Attorney, was appointed City Attorney, vice W. L. Goldsborough, resigned, and George N. Hurd, formerly law clerk in this office, was on the same date appointed Assistant City Attorney.

As during the preceding year, the time of the office has been largely occupied by investigations of land titles and the preparation of opinions and reports requiring an examination of the old Spanish insular and municipal records. The organization of the new Court of Land Registration has resulted in a considerable increase of the work of this character, as the city is now cited by said court in all cases involving the ownership or boundary of an estero or the boundary line of a street or public plaza, as well as in cases in which the city claims any interest in the land sought to be registered or is the owner of adjacent property. Frequently an investigation of this character requires the careful examination of Spanish documents and records running back hundreds of years. This is made necessary by the fact that almost none of the lands occupied and owned

by the city were conveyed to it by deed, but the grants thereof are evidenced by old records and plans which must be sought out from a great mass of unindexed insular and municipal records.

The administrative work of the department arising from its supervision of the seven offices constituting the Law Department has also increased materially. This increase is in part due to the addition of the Registrar of Deeds to the offices which report to this department.

During the past year there has also been a very notable increase in the amount of litigation conducted by this office, and it seems quite probable that during the coming year there will be a further increase of this character.

At the rendering of our last report there were eight suits in which this office appeared in its official capacity. There are now 29 actions in the various courts in which the city or its officials are parties and in which the City Attorney is required to appear. During the year 28 new cases have been begun, 10 of these being brought by the city or prosecuted on behalf of the city or the public by this office, while 18 have been instituted against the city or its officers. Of the 10 cases in which the city or the public appear as plaintiff, 6 were brought for the reclamation of land, 1 was a suit on bond for the violation of a contract with the city, 1 was a prosecution for the violation of an ordinance, 1 a criminal case in which the City Attorney conducted the prosecution, and 1 suit for the collection of water rent due the city. Of the 18 cases brought against the city or its officers, 3 were for services and materials furnished the old city of Manila under Spanish administration, 6 were against the sheriff for alleged misfeasance or nonfeasance of his official duties, 1 was a mandamus against the disbursing officer for alleged illegal failure to pay the salary of an employee, 3 were for the reclamation of land, 3 were injunctions or similar writs against the City Engineer to restrain him from enforcing building regulations, 1 suit against the city for alleged failure to comply with contract, and 1 a suit for the redemption of a censo involving property in which the city has an interest.

The following cases have been disposed of during the year: *Thomas Rodriguez y Lopez vs. The City*; by settlement acknowledging the city's contention. *Goico vs. Municipal Board et al.*; this case involved the removal of buildings condemned for sanitary reasons, and although the city was unsuccessful both in the Court of First Instance and in the Appellate Court, the result of the litigation was the removal of the buildings condemned. *City vs. Pereya et al.*; settlement acknowledging the city's contention. *Veloso y Grey vs. Municipal Board*; dismissed at plaintiff's cost. *City vs. Vicenta Rodriguez*; settlement acknowledging the city's claim in full. *Padilla vs. Municipal Board (injunction)*; judgment in favor of the city. *Padilla vs. Municipal Board (certiorari)*; dismissed by plaintiff. *City vs. Cong Wa*; judgment in favor of city paid and satisfied. *City vs. Electricista*; involving a number of cases against

the electric company for violation of Ordinance No. 36, judgment in favor of the defendant. *United States vs. Parra* (Dos Hermanos case); judgment against all defendants. *Watson vs. Peterson*; judgment for plaintiff.

The following cases are now pending: In the Court of First Instance—*Clotet vs. Winsor*; pending settlement. *Clotet vs. Winsor*; Province of Rizal; pending settlement. *City vs. Cheng Ye Chiang*; on trial. Estate of Jerome L. Mudge; settled, but awaiting instructions from heirs in United States as to distribution of funds remaining in hands of administrator. *Button vs. City*; pending on demurrer. *Tambunting vs. City*; judgment for city in justice of peace court; now pending on plaintiff's appeal in Court of First Instance. *Skidmore, B. H., vs. Cadwallader et al.*; awaiting decision of court. *Skidmore, W. G., vs. Same*; awaiting decision of court. *Aballama vs. City*; awaiting decision on city's motion to strike. *Dorr vs. Ui Eng Seng et al.*; issues not joined. *Barretto vs. Municipal Board*; pending on defendant's motion to strike. *Schmid vs. Peterson*; issues not joined. *City vs. Go Checo*; judgment for defendant in Municipal Court now pending on appeal in the Court of First Instance. *City vs. Salgado*; tried September 11, 1902; decision not yet rendered by judge. *Farré vs. Municipal Board*; pending settlement. *City vs. Morley*; pending trial. *S. del Rosario vs. Municipal Board et al.*; pending on plaintiff's motion to make temporary injunction permanent. *Porcuno et al. vs. Yap Tico et al.*; pending on demurrer. *City vs. Dy Feco et al.*; pending settlement. *City vs. Basa y Mariafosque*; pending trial. *City vs. Delfin Santiago*; pending settlement. *Merchan vs. City*; demurrer argued March 17, 1903; decision not yet rendered. *Button vs. City*; pending on demurrer. In re Roman Canlas; judgment in Court of Land Registration against the city; now pending on city's appeal to Court of First Instance. *Aguado vs. City*; awaiting decision of defendant's demurrer. In the Supreme Court—*Villar vs. Municipal Board*; pending settlement of bill of exceptions. *City vs. Jacinto del Rosario*; pending settlement. *Hoey vs. Baldwin*; pending settlement of agreed statement of facts.

OFFICE OF PROSECUTING ATTORNEY.

Number of cases instituted.

In the Municipal Court.....	592
In the Court of First Instance.....	472
Total	1,064

Cases in the Court of First Instance.

Cases instituted by Prosecuting Attorney.....	472
Cases from the municipal court (appeals and after preliminary examination)	181
Total	653

Disposition of cases in the Court of First Instance.

Convictions (number of persons convicted, 452; appealed by defendants, 51 cases)	270
Plea of guilty entered.....	18
Acquittals (appealed to Supreme Court by State, 8 cases; 1 sent to asylum).....	70
Dismissals	133
Transferred to other courts.....	7
Bond forfeited	2
Accused died before trial.....	1
Remanded to the Municipal Court.....	4
Awaiting extradition	9
Pending	67
Property recovered on search warrants.....	16
No property recovered on search warrants.....	28
Accused not arrested.....	28
Total	653

Disposition of cases filed in the Municipal Court.

Convictions	279
Dismissals	150
Acquittals	24
Sent to Court of First Instance after preliminary examination	9
Appealed to the Court of First Instance.....	25
Bail forfeited	3
Accused died before trial.....	1
Confined in Bilibid on report of medical examiner.....	1
No record of disposition obtainable.....	93
Pending	7
Total	592
Habeas corpus cases defended (discharged, 4; remanded, 8)	12
Number of deaths investigated as coroner.....	34
Number of letters received.....	480
Number of letters sent.....	673

The following changes have occurred in the personnel of this office during the fiscal year: Mr. Herbert D. Gale appointed Assistant Prosecuting Attorney July 18, 1902; Hon. John C. Sweeney appointed Prosecuting Attorney October 8, 1902; F. B. Ingersoll appointed First Assistant Prosecuting Attorney, October 8, 1902, but afterwards, during the year, resigned; Hon. John C. Sweeney appointed judge of the Court of First Instance April 1, 1903; Mr. Charles H. Smith appointed Prosecuting Attorney for the city of Manila April 1, 1903; Dionisio Chanco, First Assistant Prosecuting Attorney, appointed judge of the Court of First Instance April 7, 1903; José Abreu appointed First Assistant Prosecuting Attorney April 7, 1903.

A comparison of the amount of business done by this office during the past year with that accomplished during the year preceding shows that

during the first year mentioned there were 189 cases instituted in the Court of First Instance, while during the second year there were 653 cases. During the first year there were 96 convictions in the Court of First Instance; during the second year 270. In the Municipal Court during the first year there were 370 cases instituted by this office; during the second year 592. In the same court during the first year there were 143 convictions; during the second year 279.

It will be seen that the business of the office of Prosecuting Attorney has increased more than 100 per cent during the last year, and in addition to this there have been during the period covered by this report a great number of investigations of cases submitted in which no complaints were filed for the reason that at the conclusion of such investigations it was considered by the prosecuting attorney that the evidence submitted did not justify formal proceedings.

The performance, by this office of the duties of coroner has also enlarged the work of the office substantially. In the Court of First Instance there are now pending nearly seventy criminal cases in charge of this office.

OFFICE OF SHERIFF OF MANILA.

A considerable increase of business is reported in this office arising from the creation of Part III of the Court of First Instance, Court of Customs Appeals, and the Court of Land Registration. This office now serves the following courts: Three divisions of the Court of First Instance, Manila; the Court of Customs Appeals; Court of Land Registration; two justices of the peace courts, city of Manila; Supreme Court of the Archipelago.

The duties of the office have also been increased by the transportation of prisoners to and from the several courts, which was assumed by the sheriff November 1, 1902.

The following is a detailed statement of the processes which have passed through this office during the year just closed:

Attachments	80
Citations in civil cases.....	923
Citations in criminal cases.....	3,051
Executions	302
Injunctions	47
Notices of attachments filed with registrar.....	26
Notices of garnishee served.....	29
Notifications	71
Order of ouster	117
Order of arrest, civil cases.....	24
Order of arrest, criminal cases.....	700
Order of sale.....	2
Order to show cause.....	25
Order to suspend execution.....	2
Order to take possession.....	4
Order to render inventory.....	2

Order to make deed.....	1
Order to make deposit.....	2
Order to place child in convent.....	1
Order to deliver property.....	3
Posting notices of land registration.....	48
Putting person in possession.....	5
Raising attachments	30
Raising injunctions	2
Sales advertised	62
Search warrants	14
Summonses with complaint.....	1,792
Taking indemnity and other bonds.....	13
Writs of habeas corpus.....	46
Writs of replevin	16
Writs of mandamus.....	2
<hr/>	
Total number of processes.....	7,442

A comparison of these figures with those of the preceding year shows a decided increase.

The amount of fees collected by the sheriff during the year was as follows:

Mexican currency	\$9,015.41
United States currency.....	226.89

These fees were derived almost exclusively from civil cases.

MUNICIPAL COURT OF THE CITY OF MANILA.

On February 15 of the present year the Municipal Court north of the Pasig was consolidated with that south of the Pasig, and since that date all proceedings have been before Judge J. M. Liddell, holding court at the Parian station. This has resulted in a large increase in the work of that judge and a decrease in the operating expenses of the court. Judge Liddell has been able to take care of all of the business which has come before him, but there would seem to be an urgent need for an increase in his clerical force.

The results of the first four and a half months since the consolidation would seem to justify the wisdom of uniting the courts.

Statement of the operations of both courts for the fiscal year.

District.	Com- plaints filed.	Tried.	Con- victed.	Fined.	Sen- tenced to im- prison- ment.	Impris- oned for nonpay- ment of fine.	Cases sent to Court of First In- stance on appeal, etc.
South of the Pasig River.....	906	1,467	1,002	905	211	114	10
North of the Pasig River.....	3,534	4,567	3,683	3,340	866	523	62
City of Manila	5,237	7,166	6,877	5,126	1,096	655	45
Total.....	9,802	13,184	11,562	9,371	2,173	1,292	117

Race and sex of persons tried.

Nationality.	Male.	Female.
Filipinos	9,888	1,098
Chinese	1,483	
Americans	618	
Spaniards	28	6
Japanese	10	6
Other nationalities	40	7

Number of offenses committed.

Character of offense.	Num- ber.	Character of offense.	Num- ber.
Larceny	613	Violation of sanitary regulations	314
Estafa	127	Violation of license regulations	329
Gambling	1,534	Violation of street regulations	139
Drunkenness	450	Violation of vehicle regulations	1,434
Assaults	531	Resisting arrest	57
Vagrancy	449	Interfering with police officer	62
Cruelty to animals	501	Begging	58
Violation of Manila liquor law	77	Attempted rape and seduction	13
Fast and reckless driving	567	Indecent exposure	48
Disorderly conduct	627	Carrying weapons before passage of act of Commission	14
Riding bicycles on sidewalk	153	Attempt at bribery	21
Obstructing streets and walks	609	Other offenses	27
Committing nuisances	209		

Collections in fines, forfeitures, etc., United States currency, \$52,894.11.

OFFICE OF THE REGISTER OF DEEDS.

This office was created by Act No. 496 and was organized February 7, 1903.

The first incumbent was Señor Francisco Ortigas, who filled the office from its organization to April 15, 1903, when he resigned and was succeeded by the present incumbent, Señor Alberto Barretto.

Following is a statement of the operations of the office since its organization:

Proceedings under the provisions of the Mortgage Law.

Inscriptions of titles	416
Titles returned for correction	31
Inscriptions denied	10
Inscriptions suspended	11
Total titles presented for inscription	468

Proceedings under Land Registration Act (Act No. 496).

Decrees of court transcribed and original certificates of property issued	18
Conveyances of property which had already been registered and certificates issued	6
Mortgages and other contracts entered, affecting estates registered in accordance with Act No. 496	1
Entries made in the so-called mortgage book in accordance with Act No. 496 (6 of sales and 1 of mortgage)	7

Fees collected since the organization of the office.

In accordance with the Mortgage Law:

Mexican currency \$4,898.44

In accordance with Act No. 496:

Mexican currency 78.39

United States currency..... 34.00

JUSTICES OF THE PEACE COURTS.

There has been no change in the personnel of these offices. The amount of business transacted has been substantially the same as for the preceding year, although there has been a slight increase in the receipts.

Following is a statement of the business transacted by the two courts during the year:

Suits for the recovery of sums of money.....	807
Suits to recover possession of real property.....	423
Suits to secure return of personal property.....	37
Suits for specific performance	37
Affidavits taken	35
Deposits of money received.....	91
Marriage certificates received.....	2,134
Marriages solemnized	65
	<hr/>
Marriage certificates registered.....	2,199
	<hr/>
Total	3,629

Collections, costs, and fees (Mexican currency), \$4,480.50.

CONCLUSION.

It will be noted that during the period between the making of the last report and April 8, 1903, the department was in charge of Mr. W. L. Goldsborough. It only remains to be stated that the present City Attorney upon assuming his duties found the department in excellent condition, thoroughly organized, and all litigation and other matters in charge of the office completely in hand and the books and accounts in excellent condition, results which must be attributed to the energetic and painstaking work of Mr. Goldsborough while at the head of the department.

Lastly, the undersigned takes pleasure in reporting that the finances of the department are in first-class condition, and the best proof of this is that the income, after paying all expenses, leaves a surplus of about \$15,000, Mexican currency, to be turned into the city funds.

Respectfully submitted.

MODESTO REYES, *City Attorney.*

The SECRETARY OF THE MUNICIPAL BOARD,

Manila, P. I.

REPORT OF CHIEF OF FIRE DEPARTMENT.

OFFICE OF THE CHIEF OF FIRE DEPARTMENT,

Manila, P. I., July 25, 1903.

GENTLEMEN: I have the honor to transmit herewith the annual report of the operations of this department for the fiscal year ending June 30, 1903, together with such recommendations as are deemed necessary for betterment of the department.

Ninety-five alarms of fire were received by this department. The total estimated amount of loss and damage to buildings and their contents amounted to \$1,085,429, United States currency. The time worked by companies at these fires was one hundred and seventy-two hours and thirty-three minutes; 41,280 feet of hose was laid, 524 feet of ladders raised, and 1,980 gallons of chemicals used.

By direction of your honorable Board the department was called upon to destroy, during the year, a number of shacks infected with disease, under the supervision of a member or representative of the Board of Health, who was invariably present on such occasions. The department was present with apparatus as a matter of precaution to prevent the possible extension of the fire to adjoining buildings. In no instance was the fire permitted to extend to adjoining property. A complete report of these fires is submitted herewith.

Receipts and expenditures.

Object of expenditure.	Appropriation.	Expended.	Balance.
Fire apparatus	\$38,871.80	\$38,871.80	-----
Equipment fire apparatus	4,000.00	4,000.00	-----
Equipment for firemen	750.00	750.00	-----
Equipment fire stations	800.00	270.04	\$529.96
Repairs and maintenance	1,750.00	1,185.22	564.78
Electrical branch	1,050.00	1,050.00	-----
Construction fire and police alarm system	4,983.17	4,983.17	-----
Fire-alarm system	39,017.00	39,017.00	-----
Total equipment	91,221.97	90,127.23	1,094.74
Forage	8,850.00	7,197.13	1,652.87
General supplies	480.00	480.00	-----
Office supplies	400.00	400.00	-----
Transportation	20.00	20.00	-----
General and office supplies	2,500.00	2,500.00	-----
Furniture and office furniture	100.00	100.00	-----
Construction fire and police alarm system	10,000.00	9,999.71	.29
Total contingent expenses	22,350.00	20,696.84	1,653.16

Receipts and expenditures—Continued.

Object of expenditure.	Appropriation.	Expended.	Balance.
Salaries fiscal year—			
1903	\$66,830.00	\$60,554.27	\$6,275.73
1902	800.00	800.00	
Grand total	181,201.97	173,831.50	7,370.47

ORGANIZATION.

The membership of the department at present consists of 100 officers and men, as follows:

Designation.	Annual salary.	Authorized.	Employed.
Chief of department	\$3,000	1	1
Deputy chief of department, class 6	1,800	1	1
Electrician, class 6	1,800	1	1
Assistant electrician, class 7	1,000	1	1
Chief engineer, class 8	1,500	1	1
Clerks, class 8	1,400	2	2
Captains, class 9	1,200	10	10
Engineers, class 9	1,200	4	3
Linemen, class 9	1,200	2	2
Linemen, class 10	1,000	1	1
Lieutenants, class 10	1,000	6	5
Drivers, Class A	900	28	27
Lieutenants, Class D	600	4	4
Engineers, Class D	600	4	3
Drivers, Class J	240	5	3
Pipemen	180	29	27
Truckmen	180	10	8
Total		110	100

DISTRIBUTION.

Santa Cruz station.—Headquarters: One chief of department, 1 deputy chief of department, 1 captain (acting deputy chief), 1 chief engineer, 1 electrician (city electrician), 1 assistant electrician, 2 clerks, 3 linemen.

Engine Company No. 2: One captain, 1 lieutenant, 1 engineer, 1 lieutenant (native), 1 engineer (native), 4 drivers, 1 driver (native), 6 pipemen (native), 1 truckman (native).

San Nicolas stations.—Engine Company No. 1: One captain, 1 lieutenant (native), 1 engineer, 1 engineer (native), 4 drivers, 4 pipemen (native), 3 truckmen (native).

Chemical Engine Company No. 1: One captain, 2 drivers, 2 pipemen (native).

Hook and Ladder Company No. 1: One captain, 2 drivers, 3 truckmen (native), 1 pipeman (native).

Engine Company No. 3: One captain, 1 lieutenant, 1 engineer, 1 engineer (native), 4 drivers, 1 driver (native), 4 pipemen (native).

Chemical Engine Company No. 3: One captain, 1 lieutenant (native), 2 drivers, 2 pipemen (native).

Manila station.—Engine Company No. 4: One captain, 1 lieutenant, 2 drivers, 2 pipemen (native).

Chemical Engine Company No. 4: One captain, 1 lieutenant (native), 3 drivers, 1 truckman (native), 1 pipeman (native).

Tanduay station.—Hook and Ladder Company No. 2: One captain, 1 lieutenant, 3 drivers, 3 pipemen (native).

Chemical Engine Company No. 2: One lieutenant, 2 drivers, 2 pipemen (native).

The new fire station located in the San Nicolas District has been received from the hands of the contractors and placed in use. It is occupied by Engine Company No. 1, Hook and Ladder Company No. 1, and Chemical Engine Company No. 1. With a few alterations and repairs necessary for the comfort of the men this station will be complete for the uses and purposes of this department.

In the quarters of Engine Company No. 2, located at No. 11 Calle Alcala, District of Santa Cruz; several alterations and repairs were rendered necessary, including the setting up and placing in use of a water heater for the purpose of facilitating hot water for the boiler. There are some additional repairs to be made in this station, orders for which have been issued, and I expect to have them completed shortly.

The quarters of Engine Company No. 3, located at No. 288 Calle Nozaleda, Paco District, have been entirely overhauled, repaired, and painted, and are now in excellent order.

The quarters of Chemical Engine Company No. 3, located at No. 284 Calle Nozaleda, Paco District, have been entirely renovated and a recreation room attached for the use of the men of each company. This station is now in good repair, and will not require any additional alterations or repairs for some time to come.

The quarters of Engine Company No. 4, located at No. 27 Calle Audiencia, Intramuros, were formerly used as a storeroom by the Street Cleaning Department, and were turned over for the use of this department. These quarters were entirely overhauled, repaired, painted, and placed in first-class condition and afford one of the most convenient and comfortable houses we have for the accommodation of men and apparatus. Light, ventilation, and sanitary conditions are entirely satisfactory.

The quarters of Hook and Ladder Company No. 2 and Chemical Engine Company No. 2, located at No. 11 Calle Concordia, Tanduay, Quiapo District, received but a small amount of repairs on account of contemplated erection of a new building on the present site in the near future. This building will in all probability be erected this season, the companies in the meantime being housed in temporary quarters in the immediate vicinity.

Rules and regulations for the guidance of the force were submitted to your honorable Board for approval and were approved on November 5, 1902. These were caused to be printed in Spanish and English, and bound copies were furnished to all members of this department.

The new uniform, together with the new style of buttons, cap, devices, badges, and officer's insignia, which were approved by your honorable Board, have been placed in use and are now worn by the uniformed members of this force.

The schools formerly used by the members of this department were discontinued on account of lack of appropriation, and there has been substituted in lieu thereof a practice form of drill with apparatus and horses, and each company is required to practice early each morning on the days assigned for such work, continuing the year round, the weather permitting. This practice consists mainly in the methods and movements in vogue at fires, as well as the use of appliances, with a view to systemize the action of the officers and men while on duty at fires. This practice has had a beneficial result to the officers and men of the department, which could not have been obtained otherwise.

Number of horses owned by the department: American, 33; Australian, 1; native, 11.

During the fiscal year the department acquired by purchase 26 American horses, at an average purchase price to this department of \$264, United States currency, per head.

On November 7, 1902, the department sold at public auction, by order of the Philippine Commission, two native horses which were adjudged unfit for further service in this department.

On August 23, 1902, 1 American horse died suddenly of enteritis.

The city veterinarian destroyed horses for this department as follows: July 7, 1902, 1 American horse, on account of comminuted fracture of the right metacarpal bone; October 30, 1902, 1 American horse, on account of glanders; March 30, 1903, 1 American horse, on account of glanders.

Under present conditions we are compelled to purchase horses from the Quartermaster's Department or dealers, most of which were in use in the cavalry branch of the military service and have never been accustomed to wearing a collar, and we also find many evidences of disease among them.

We are in hopes that some remedy will be devised whereby this department may obtain suitable horses. This can only be done by direct purchase from the United States, under contract, through the Insular Purchasing Agent. This course would save a great amount of expense and trouble in the handling and conveyance of our apparatus.

The following apparatus received under contract dated January 7, 1902, with the American Trading Company, was tested and placed in use, all of the requirements of the contract being satisfactorily complied

with: Two steam fire engines, Metropolitan, 3-horse hitch, capacity 700 gallons per minute; 4 chemical engines, 2-horse hitch, capacity 160 gallons each, carbonic-acid gas system; 2 hook-and ladder trucks, 2-horse hitch, each carrying 182 feet of ladders; 4 hose wagons, 2-horse hitch, each with a carrying capacity of 1,000 feet of $2\frac{1}{2}$ -inch hose.

The test of the engines was held September 23, 1902, and proved fully satisfactory, coming up to the standard of the contract. The above-named apparatus is complete, with all the improvements and apparatus necessary for effective fire work.

In addition to the above-named apparatus there were also received under this contract 1 chief's buggy, 1-horse hitch; 15 double sets quick-hitching harness and 2 single sets of quick-hitching harness (these harness are fitted with the Barry quick-hitching hame-extension collars); a Sigafoss ladder hoist; 2 Champion chemical fire extinguishers, hand, 3-gallon; 6,000 feet of Standard $2\frac{1}{2}$ -inch rubber-lined paragon hose; a miscellaneous assortment of pipes, shut-off, control, and spray nozzles, and general supplies for the use of this department.

The following apparatus is in service and in good condition:

San Nicolas fire station: Engine Company No. 1—One Metropolitan steam fire engine and 1 hose wagon, chemical engine; Hook and Ladder Company No. 1—One hook-and-ladder truck.

Santa Cruz fire station: Engine Company No. 2—One steam fire engine (Metropolitan), 1 hose wagon, 1 supply cart, a chief's buggy, a deputy chief's buggy, and 1 chief engineer's cart.

Paco fire station: Engine Company No. 3—One steam fire engine (Merryweather, London, England), capacity 400 gallons per minute (unreliable), 1 hose wagon, a supply cart; Chemical Engine Company No. 4—One chemical engine.

Tanduy fire station: Hook and Ladder Company No. 2—One hook-and-ladder truck; Chemical Company No. 2—One chemical engine.

Five thousand feet of Amazon $2\frac{1}{2}$ -inch hose and 6,000 feet of $2\frac{1}{2}$ -inch paragon hose is in active service with the engine companies.

On April 24, 1903, by authority of the Municipal Board, 1 steam fire engine (Shand, Mason & Co., London, England), complete with suction hose, couplings, wrenches, etc., was transferred to the Department of Engineering and Public Works, it being deemed unfit for further service in this department.

Contracts have been entered into by the Insular Purchasing Agent for additional apparatus for the use of the department, some of which will probably be in use in a few months and the balance will be due about January 1, 1904. When this new apparatus has been placed in service it will complete the equipment of the department, giving a total of six fire-engine companies, which I think will be ample for the use of this city in protection against fire.

Additional equipment has been ordered for the use of this department which consists of life nets, life belts, and scaling ladders, all of which are intended for the protection of lives at fires. Each company will be furnished with a part of this equipment, and in emergency cases can be put to use by the first company to arrive at the scene of the fire.

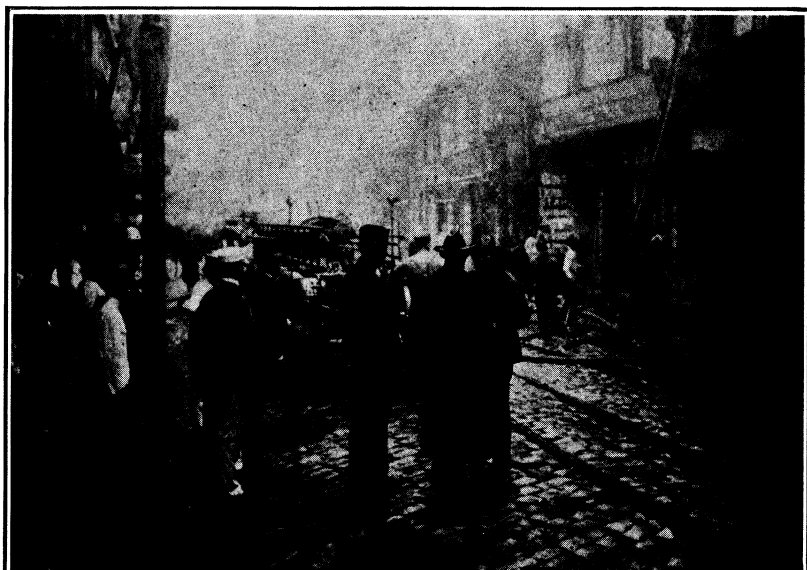
Inspection of buildings was continued from time to time when found necessary to enforce regulations and requirements for safety against fire or danger to life or property. There are many old and dilapidated buildings in the city, some of which should be razed, as they are a menace to the public.

Since my last report a new ordinance has been adopted, and its requirements relative to the safety of the general public when attending places of amusement enforced. The requirements of the new ordinance required the installation of certain fire appliances, extra means of exit from all parts of the buildings, regulated the width of aisles, and provided that all doors open outwards. The theaters that have been licensed by the City Assessor and Collector are regularly inspected in order that the requirements of this ordinance may be complied with. Whenever performances are rendered that cater to the citizens of this city other than natives, a detail of American firemen is on duty throughout the entire performance, and the building is thoroughly inspected for evidence of fire both before and after performances.

The majority of the fire plugs or street hydrants, being located on the surface of the streets, are frequently rendered unserviceable by traffic, the box surrounding them becoming filled with dirt and other refuse. The department for its own inspection purposes has divided the city into ten inspection districts, each of these districts being under the supervision of one of the captains of this department. The hydrants are being continually inspected, and when they are found to be out of order report of such fact is immediately made to the Superintendent of Water Supply, Sewers, etc., thereby enabling such defects to be readily located and repaired. This is necessary for the proper protection of the city and enables the firemen of this department to become acquainted with the location of the hydrants throughout the city.

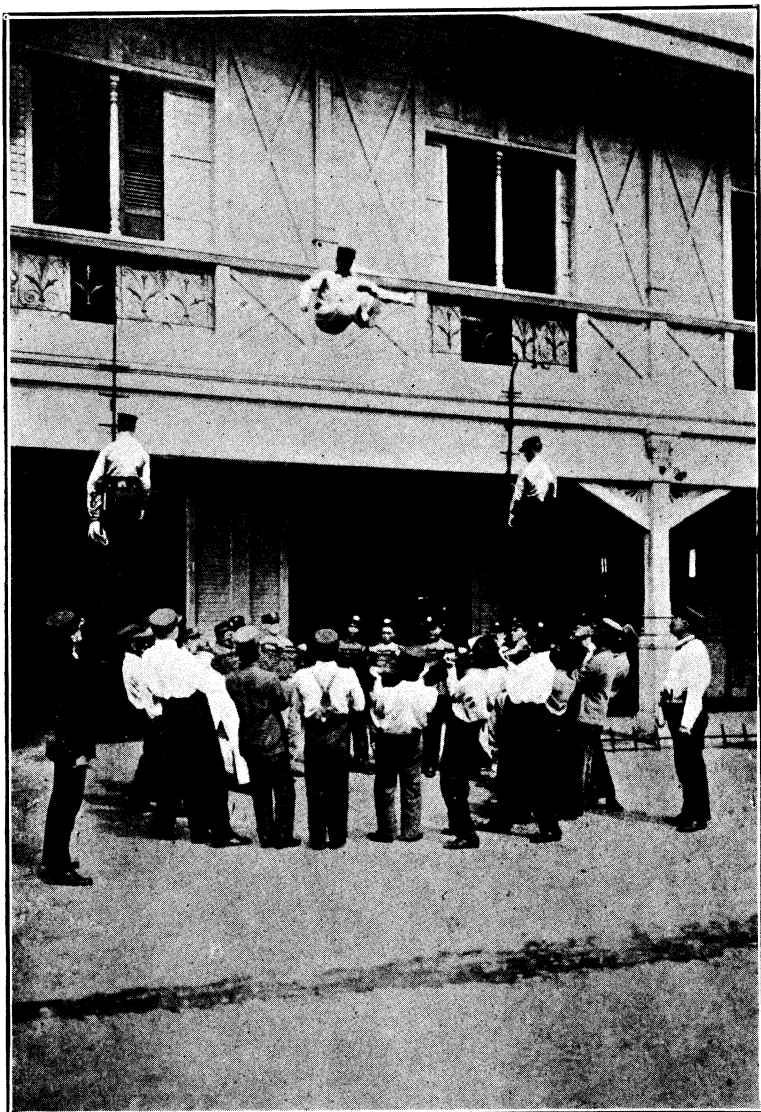
The Department of Engineering has recently purchased a number of post hydrants, which are now being set in various portions of the city, particularly in the streets having large water mains. This will be a great improvement over the old plug, which will be replaced by this hydrant as soon as a sufficient number are on hand.

I desire to again call your attention to the necessity of enforcing a rigid inspection of all boilers located within the city limits, and the licensing of all engineers when found competent to fill such positions, after a rigid examination.



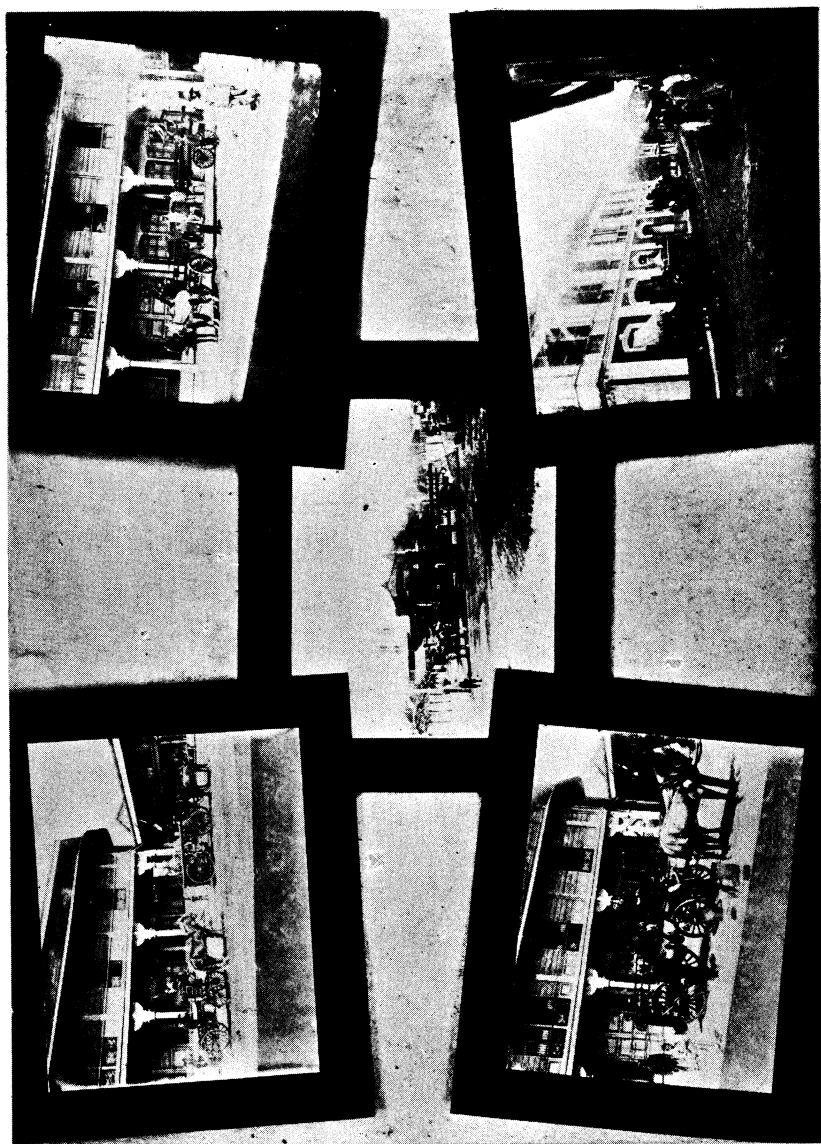
FIRE DEPARTMENT AT WORK, 1903.



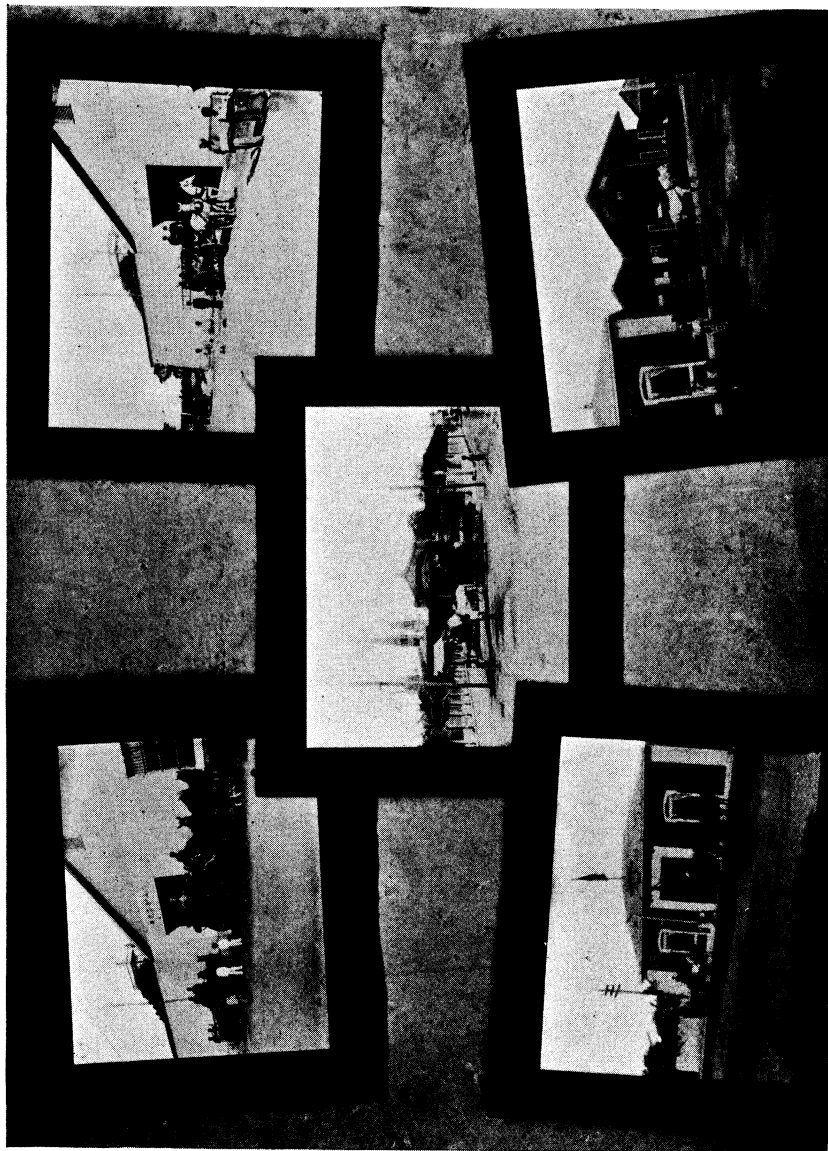


FIRE DEPARTMENT DRILLING WITH LIFE NET.



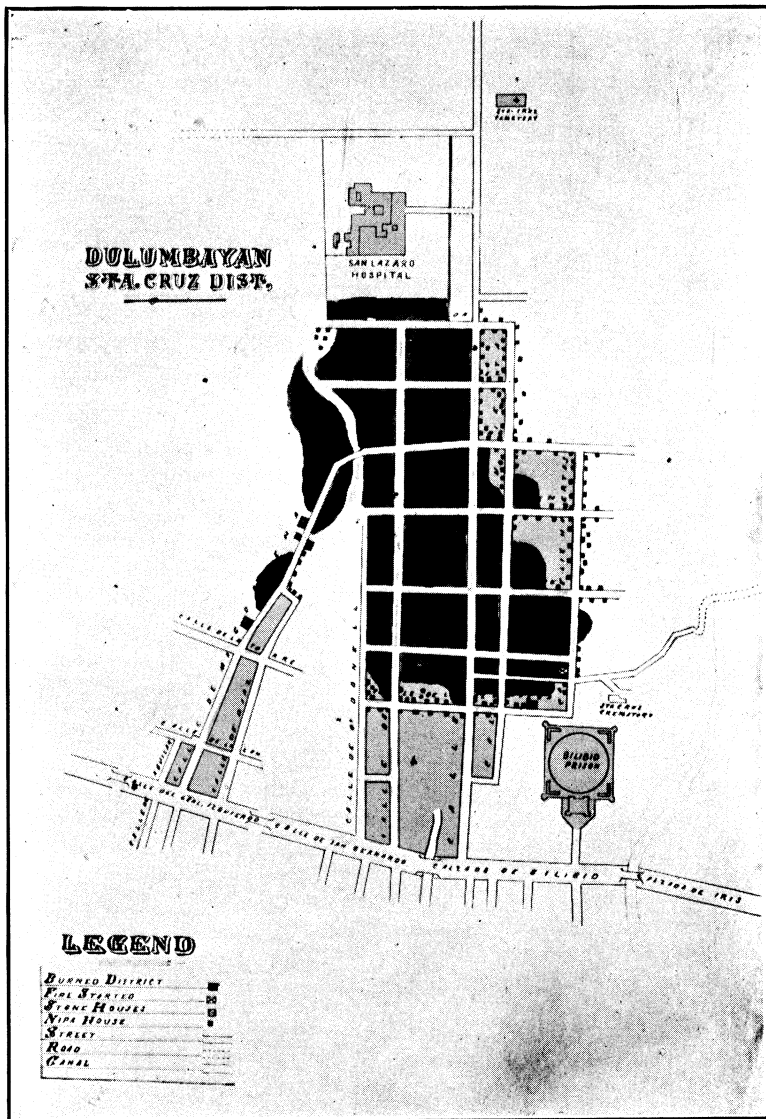


FOUR STEAM FIRE-ENGINE COMPANIES, WITH HOSE WAGONS.

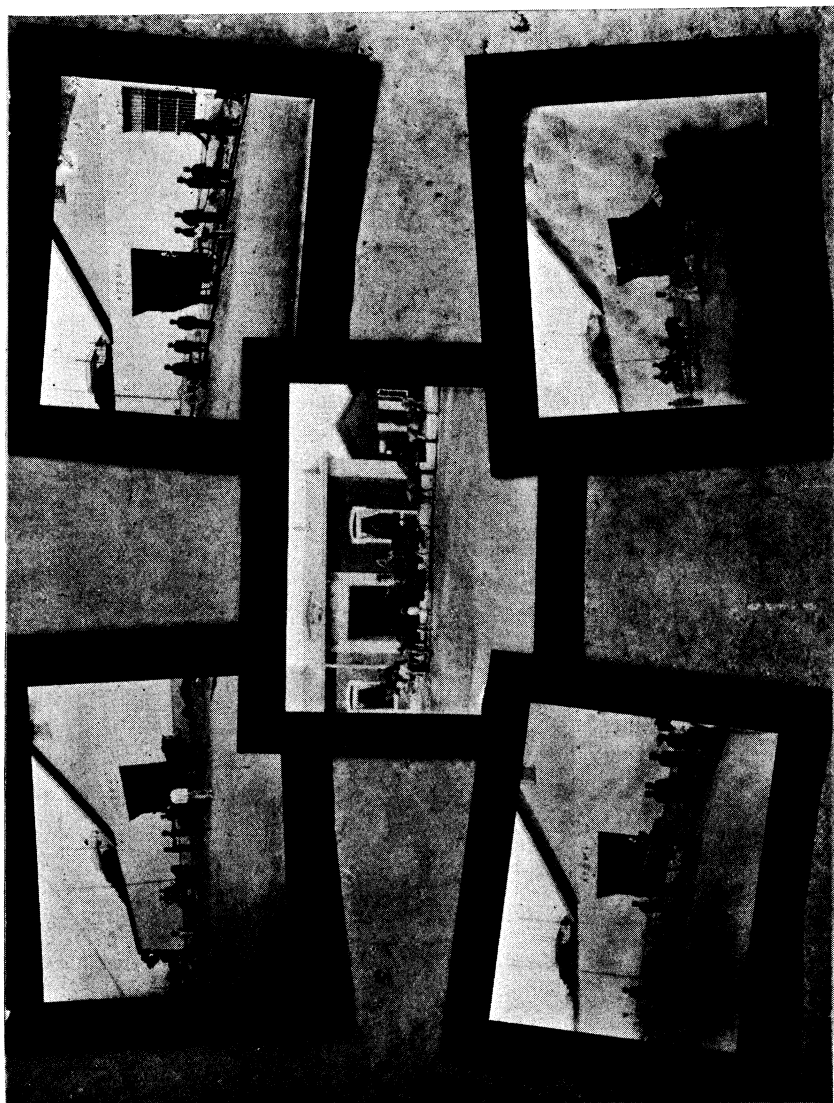


CHEMICAL ENGINE AND HOOK-AND-LADDER COMPANIES.





AREA OF NIPA FIRE IN TROZO, MANILA, MAY 19, 1903.



MANILA FIRE DEPARTMENT, 1900, SHOWING OLD-STYLE APPARATUS.



A new ordinance regulating combustibles and explosives and the storage, handling, and use of petroleum has been enacted during the last year. This ordinance requires a great deal of time and attention by this department, to keep in touch with the dealers as to the exact location of such materials while in storage and in transit. Since the enactment of this ordinance twenty-four permits for storage have been granted, three of which were for fireworks and the remaining twenty-one covered storages as follows: Gum copal, 163,950 pounds; gum elemi, 35,000 pounds; varnish, 500 gallons; naphtha, 20,000 gallons; lubricating wax and oil, 1,000 barrels; kerosene oil, 3,551,950 gallons.

There were also granted eighteen permits for transportation of explosives and combustibles through the streets and waterways of this city.

The fire and police alarm system (Gamewell), constructed under the supervision of the electrical branch of this department, has been accepted and placed in use and has given complete satisfaction. The material received under contract has been entirely satisfactory with the exception of one switchboard, which has been replaced by the contractor without cost to this department.

The following is a summary of the work done by the electrical branch of this department: Molded 5,480 lead screws on iron pole fixtures; set 418 poles; strung 182 miles of wire; installed 75 fire-alarm boxes, 78 police boxes, central fire alarm and switchboard, battery board, 5 police desks and battery boards, 5 meter generators, 600 cells storage battery, fire gongs in five police stations, fire gongs, indicators, and electric horse releasers in five fire stations, fire gongs in residences of Chief of Police and inspector of police, 1 fire gong in La Electricista plant, ambulance gong and indicator in Philippine Civil Hospital, telephones in office and residence of Chief of Police, police headquarters, offices of captains at various police stations, 1 private police box at Bilibid Prison, 11,897 incandescent lights, 202 fan motors, 32 power motors, 59 arc lights, 4 power dynamos, 385 meters, and placed automatic electric-light switches in each of the five fire stations in this department; constructed new telephone line from City Hall to Rotunda for city waterworks telephone, and telephone line from Santa Cruz fire station to fire stations Nos. 1, 4, and 5. These lines are the property of the city, but the telephones are rented from the Manila Telephone Company.

Santa Cruz, Tanduay, and Paco fire stations were rewired; all the wiring removed from the Provost Building; the Court of Land Registration Building, building occupied by the City Attorney, Anloague police station, Parian police station, and the building occupied by the police court wired and estimate made for electric lights in several other city buildings.

After the entire police circuits were built a police station was established at Paco, and consequently the lines along Calle Concepción, San

Marcelino, and Nozaleda had to be rebuilt. The Santa Cruz police station was established and lines run and afterwards changed to Santa Cruz fire station. The establishment of an ambulance station at the Civil Hospital also necessitated the rebuilding of the line from Santa Cruz fire station to Plaza Santa Ana on heavier poles. Several other changes in the police system necessitated the changing of various lines in the Walled City, along Calle Nueva, Ermita, and Calle Misericordia, Santa Cruz.

The inspection department of the electrical branch of the Fire Department issued 1,457 permits and 1,244 certificates and collected \$1,840, United States currency, in inspection fees, report of which has been rendered monthly to the Auditor for the Philippine Islands, and amounts deposited with the City Assessor and Collector.

The electrician of the Fire Department is the city electrician and is assisted in his work of enforcing the requirements of Ordinance No. 36 and in the supervision and maintenance of the fire and police alarm system by an assistant electrician and three American linemen.

In the construction and repair work there have been employed an average of 23 native laborers per month, at an average daily wage of \$1.67, Mexican currency. These native laborers are experienced in line and general repair work, and while classed as laborers their ability is above that of an ordinary native laborer, hence the apparently high wages when compared with the laborers of other departments.

It is contemplated in the near future to extend the fire and police alarm system throughout the various districts of the city, the great need of which is being daily felt by the department, as no companies are as yet located in many of these subdistricts, and by the placing of this contemplated extension matters would be facilitated by giving quick alarm to distant companies in emergency cases.

I recommend the erection of a new fire station to be located near the city stables on Calle Azcarraga, on city property. This locality is at present not protected by fire companies nearer than those at Santa Cruz and San Nicolas fire stations. The addition of this company would afford very ample protection for the Tondo District as well as for the city property in the immediate vicinity.

I would also recommend the erection of a fire station in the vicinity of the Rotunda, District of Sampaloc, which is now entirely unprotected against fire, the nearest company being the chemical engine company located at Tandua. In the event of a fire occurring in this district it will in all probability make great headway before the arrival of the steamer from Santa Cruz, and I request a favorable consideration for the protection of this locality against fire.

I have to thank the members of your honorable Board for the many

kindnesses and considerations shown this department, and express my appreciation of the zealous efforts of the member in charge of the affairs of this department toward the advancement of its interests.

Very respectfully,

HUGH BONNER,
Chief of Fire Department.

The MUNICIPAL BOARD,
Manila, P. I.

Report of fires for the fiscal

Location of fire.	Date.	Alarms received.			Height (in stories).	Class of building.
		Hour.	How received.	Box No.		
	1902.					
Anloague and D. de Alba	July 4	1.10 a.m.	Phone		1	Concrete, iron
Paseo Azcarraga	July 7	2.50 a.m.	do		2	Wood, brick
286-302 Arranque	July 13	8.55 p.m.	Verbally			
Plaza del Carmen	Aug. 2	9.10 p.m.	do		1	Iron
48 San Luis, Ermita	Aug. 6	7.30 a.m.	Phone		2	Wood, brick
91 Escolta	Aug. 13	6.00 p.m.	None		2	Brick, stone
Outside city limits, near San Lazarus.	Aug. 20	11.15 p.m.	Phone			
138 Anloague	Aug. 25	8.25 p.m.	do		2	Brick, stone
38 Gastambide	Aug. 27	8.30 p.m.	Verbally		2	Wood, stone
45 San Jacinto	Sept. 8	12.50 p.m.	Phone		3	Brick, stone
83 Escolta	Sept. 9	10.05 a.m.	do		2	do
17 Plaza del Conde	Sept. 11	7.04 p.m.	do		2	Wood, stone
149 Escolta	Sept. 12	6.00 p.m.	do		2	do
227 Magallanes	Sept. 14	9.04 p.m.	None		2	Wood
66 San José	Sept. 17	10.15 a.m.	Phone		2	Wood, brick
Alix	Sept. 18	4.00 a.m.	Verba			Fire and police alarm pole.
158 Palacio	Sept. 20	8.50 p.m.	Phone		2	Brick, stone
27-45 Lardizabal, 10-20 Castaños	Oct. 22	2.03 a.m.	do		1½	do
Canonigo, Paco	do	2.05 a.m.	Verbally			
San Luis, Ermita	Oct. 23	6.05 p.m.	Phone			
Cervantes	Oct. 25	1.15 p.m.	do		1	Wood
Pasig River opposite Estero de Binondo.	Oct. 27	5.37 p.m.	do			Launch <i>Emma</i>
152 Arranque	Oct. 28	6.20 p.m.	Verbally		2	Brick, wood
2 Luzon	Oct. 29	6.50 p.m.	Phone		1	Nipa
82 Balicbalic	Nov. 2	2.40 p.m.	do		1	do
15 Plaza Moraga	Nov. 4	10.05 p.m.	do		2	Stone, wood
46 Casulucan	Nov. 6	12.30 p.m.	do		2	Nipa
132 San Sebastian	Nov. 11	6.30 p.m.	do		1	Stone, wood
20-24 Santiago, Paco	Nov. 25	5.55 p.m.	Verbally		1	Nipa
30 Santa Elena	Nov. 27	5.17 p.m.	Phone		2	Brick, stone
Nueva, Ermita	Nov. 25	5.58 p.m.	do			
60 Echague	Dec. 10	8.00 a.m.	Verbally		2	Stone, wood
3 Trinidad	Dec. 12	8.00 p.m.	do		2	do
Nueva, Binondo	Dec. 18	12.40 a.m.	Phone		3	Brick, wood, stone
162 Real, Ermita	Dec. 21	12.20 p.m.	do		2	Wood
64 Isaac Peral, Ermita	do	11.17 p.m.	Verbally		1	Nipa
149 Escolta	Dec. 25	5.07 a.m.	do		2	Stone, wood
	1903.					
41 Alcala	Jan. 2	6.50 p.m.	do		2	Wood
162 Real, Ermita	Jan. 5	7.45 p.m.	Phone		2	do
Berado off Nueva, Ermita	Jan. 6	4.20 a.m.	Verbally		1	Nipa
211 San Fernando	Jan. 12	9.35 p.m.	Phone		2	Stone, wood
51 Soledad	Jan. 14	4.45 p.m.	do		2	do
83-100 Arranque	Jan. 22	9.40 a.m.	Verbally		2	do
Cervantes	Jan. 25	10.15 p.m.	Phone		1	Iron, wood
Quinto Bridge, Echague	Jan. 29	9.15 p.m.	do		1	Gasoline launch

year ending June 30, 1903.

Occupant.	For what purpose used.	Cause of fire.	Amount of damage (United States currency).	Time worked.	Hose laid.	Ladders raised.	Chemical used.
Pacific Oriental Trading Co.	Warehouse -----	Unknown -----	\$280,000.00	<i>h. m.</i> 9 00	<i>Feet.</i> 1,400		
Chinese and natives.	Lodgings and store.	do -----	250.00	1 30	600		
Crispo Liagos	Acetylene gas house.	False alarm -----	1.50	0 30			
Capt. H. R. Stiler, U. S. A.	Residence -----	Carelessness with matches.					
James E. Cole	English Hotel -----	Defective flue -----	.45				
		Lamp explosion -----					
Ling Ching	Storehouse -----	Lamp explosion -----	1,525.00	1 10	250	38	
A. Downing	Residence -----	do -----	15.00				
Luciano Fernandez	Spanish Hotel -----	Defective flue -----	125.00	0 25			6
Boie & Schadenberg	German pharmacy.	Chemical explosion.	505.00	0 35		18	
Yu Loon	Cigar factory -----	Carelessness -----		0 50			
United States Government.	Post-office -----	do -----		0 21			
Jacinto Gil	Residence -----	Defective fireplace -----		0 30			
Cooley & McWilliams.	do -----	Lamp explosion -----	2.50	0 30			3
		Electric-light wire -----					3
American Hardware and Plumbing Co.	Store -----	Unknown -----	325.00	0 45			
Russians and Japanese.	House ill fame -----	Overturnd lamp -----	11,600.00	2 08	1,150	18	
		Grass fire -----		0 06			
M. L. Applegate, manager.	National Theater.	Lamp explosion -----		0 45			
Smith, Bell & Co	Lighter -----	Unknown -----		0 40			
Chinese	Tenement -----	Lamp explosion -----					
Thomas St. Clair	Residence -----	Overturnd lamp -----	179.00	0 40	900		
Cipriano Verbal	do -----	Native fireplace -----	20.00	1 10	1,200		9
American Commercial Company and Compañia Maritima.	Passageway -----	Unknown -----		0 30			
S. Oda	Residence -----	Carelessness -----	2.00	0 45			
La Electricista	Electric-light plant.	Heat from smoke-stack.	7.50	0 35	500		6
Various natives	Residence -----	Spontaneous combustion.	1,160.50	1 50	1,850		
Ang Song Co	Store and residence.	Overturnd lamp -----	15.00	0 45	250		3
		False alarm -----					
Manila Publishing Company.	Printing office -----	Carelessness -----	5.00				
Elizz Clempner	Residence -----	Lamp explosion -----	2.50	0 30			
Chua Parruqo	Store -----	Carelessness -----	60.00	0 40			
Rev. W. H. Hanna	Christian Church.	Lamp explosion -----	9.00	0 45			
Jose Cismat and others.	Residence -----	Overturnd lamp -----	545.50	1 17	1,150		160
Insular Government.	Post-office -----	Carelessness -----	9.00	0 35			
Dolores Solar	Residence -----	Lamp explosion -----	1.00	0 45			
Rev. W. H. Hanna	do -----	Overturnd lamp -----		0 25			
Gaspar Almonte	do -----	Unknown -----	12.50	0 57			6
Si Hing	Warehouse -----	Carelessness -----		1 00			
Manila Navigation Co.	Office building -----	do -----		0 25			
Various Chinese.	Cigar factory and residence.	do -----	20,000.00	5 30	2,300	74	
N. T. Hashim	National Theater.	Electric wire -----		0 16		80	
California Lumber and Development Co.	Lighter -----	Lamp explosion -----	750.00	0 32	150		

Report of fires for the fiscal year

Location of fire.	Date.	Alarms received.			Height (in stories).	Class of building.
		Hour.	How received.	Box No.		
35-37 Carvahal	Jan. 29	11.00 p.m.	Phone			Stone, wood
17 Obispo, Paco	Feb. 2	10.27 a.m.	Verbally		1	Nipa
34 Antonio Rivera	Feb. 15	2.50 p.m.	Phone		1	do
16 Fundidor	Feb. 16	9.45 a.m.	do		2	Wood
91 Norzagaray	Feb. 17	9.05 a.m.	do		2	Brick, wood
133 Nueva, Ermita	Feb. 20	7.52 p.m.	do		1	Nipa
104 Herran, Malate	Feb. 26	3.55 p.m.		236	1	Nipa shacks (40)
Outside city limits	do	9.55 p.m.	Verbally			
68 Escolta	Mar. 1	5.14 a.m.		14	2	Stone, wood
151 Lacoste	Mar. 5	8.50 p.m.		21	2	do
Santa Mesa road outside city limits.	Mar. 6	5.57 p.m.		72		Small nipa shacks (3).
192 Santa Monica	Mar. 11	9.00 a.m.			1	Nipa
39 David	Mar. 15	4.05 a.m.		13	2	Brick, wood
Pasig River, Carenero	Mar. 20	2.55 a.m.		16		Steamer, wood
5 Lavendebar	Mar. 24	2.18 a.m.		265	1	Wood, nipa
29 Corazon de Jesus	Mar. 30	11.35 p.m.		164	1	Nipa
Do	Mar. 31	3.39 p.m.		164		Grass plot
Plaza Calderon	Apr. 1	4.40 p.m.		26		
131 Gagalañin Road	Apr. 2	8.00 p.m.	Verbally		1	Nipa
Dulumbayan	Apr. 4	12.00 a.m.	do			
Gagalagin Road	Apr. 6	7.10 p.m.	Phone		1	Nipa
155 San Nicolas	Apr. 8	4.45 a.m.	Verbally			Nipa shacks (5)
88 Santo Tomas	Apr. 9	5.15 p.m.		137	2	Stone, wood
94 Arranque	do	6.25 p.m.		21	2	do
12 Isla de Romero	Apr. 12	6.35 p.m.	Phone		2	Brick, wood
Pasig River, Quartermaster Depot	Apr. 13	5.20 p.m.		146		Quartermaster lighter.
110, 116, 122, 128, and 130 Concepcion and Arroceros.	Apr. 18	5.00 a.m.	Verbally			Nipa shacks (5)
Concepcion and Arroceros	Apr. 22	4.57 a.m.		153		
162 Arranque	Apr. 27	4.10 p.m.		21	2	Wood, bamboo
281 Alix	Apr. 29	2.08 p.m.		72	1	Nipa
120 Salinas	May 4	11.37 a.m.	Phone		1	do
191 Calle Real	do	11.52 p.m.		145	2	Stone, wood
199 San Pedro	May 6	12.20 p.m.		61	2	do
20 Novaliches, 5 San José, 325 Magdalená, 138 Concepcion, 23 Piedad, 62 Buenavides.	May 15	6.00 a.m.	Verbally			Nipa
Santo Cristo and Macado	May 15	10.59 a.m.		41		
Plaza Goiti	May 16	10.03 p.m.		12	2	Stone, wood
Barrio of Nagahan	May 18	11.12 p.m.	Phone		1	Nipa
Real and Malate Church	May 19	5.15 p.m.		241		
119 Alayan	do	4.46 p.m.		54		Nipa shacks (1800)
5 Marcelino	May 25	4.14 a.m.		153	2	Wood
Lacoste and Arranque	May 27	9.19 a.m.		21		
102 Tanduay	June 9	1.54 a.m.		75	1	Stone
60 San Fernando	June 13	11.20 p.m.	Verbally		2	Wood, stone
Alongside German steamship <i>Amigo</i> .	June 16	11.00 a.m.	do		2	
259 Muelle de la Reina	June 15	4.00 a.m.	do		2	Wood, stone
44 Salcedo	June 17	8.45 p.m.	do		2	Stone
Plaza Goiti	June 18	12.01 a.m.		12		
Front Custom-house	June 20	10.00 a.m.	Verbally			Lighter
Marques de Comillas	June 26	12.45 p.m.		157	1, 2	Brick, iron
110 Taguevas	June 28	6.00 a.m.	Verbally		1	Nipa

Total amount of damage by fires, \$835,324.95; total time worked, 174 hours 33 minutes; total feet of ladders raised, 524; total feet of hose laid, 41,280; total gallons of chemical used, 1,980.

ending June 30, 1903—Continued.

Occupant.	For what purpose used.	Cause of fire.	Amount of damage (United States currency).	Time worked.	Hose laid.	Ladders raised.	Chemical used.
				<i>h. m.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Gals.</i>
Liu Chui & Co.	Store	Lamp explosion	\$2,500.00	3 10			
Romerio Mercado	Residence	Native fireplace	3.00	0 50			
American negro and natives.	do	Box matches ignited.	350.00	2 25	1,700		
Sin Choco	Opium joint	Open fireplace	3.50	0 39			
Wy Yongco	Cigar factory	Unknown		0 23			
Carlos Lorenzo	Residence	Says Chino set afire.	1.25	0 21	100		
Americans and natives.	Residences	Presumed incendiary.	500.00	4 42	2,100	38	480
José Lopez	Barber shop	False alarm		0 20			
W. A. Birch	Drug store	Unknown	50.00	1 21	450	14	9
Natives	Residence	Falling lamp	.50	0 35			
		Carelessness	122.50	2 21	1,000		
Vacant		Order of Board of Health.	6.00	3 35	550		
Kuenzle & Streiff	Warehouse	Unknown	125.00	1 25	250	52	160
Trade and passengers.		Overheated stove	100.00	0 57	650		160
Juan Lintag	Residence	Native fireplace		0 36			
Melchor Jodes.	do	Unknown	.25	0 25			
		Set afire		0 30	300		
Antonio Turesa and Corwin Santos.	Residence	False alarm	2.00	0 30			
		Sparks from chimney.		0 30			
Natives	Residences	False alarm					
		Sparks from mill		4 15	300		3
Montagne and Dominguez.	Law office	Order of Board of Health.					
J. Rohr and L. Dish-er.	Unknown	Unknown	550.00	1 59	850	84	166
Mariano Rufino	Residence	Carelessness	125.00	1 49	500		80
United States Military Government.	do	Lamp explosion	.50	0 22			
	Lighter	Lighted torch	500.00	1 46	1,550		
		Request of Board of Health.		2 40	700		
American negro.	Residence	False alarm	400.00	0 33			
Domingo de los Reyes.	do	Unknown	20.00	1 21	1,900	54	246
Natives	do	do		0 42			
Victorino José	do	Fireplace	.25	0 30			
Dr. Ambrosio Reyes.	Tailor shop	do		0 41	150		
Vacant	Residence	Defective flue	1.50	0 24			
		Request Board of Health, order of Municipal Board.		15 45	5,300		
J. Fisher	Restaurant	False alarm		0 45	330		
Marcelino Obit	Residence	Defective flue		0 28			
		Unknown	250.00	1 05			
Natives	Residences	False alarm		0 45			
Fernanda Bautista	Residence	Unknown	125,000.00	6 00	4,350		320
	do	do	60.00	1 41	350	52	160
Ynchausti & Co	Storehouse	False alarm		0 21			
T. Sparrevohn	Saloon and lodging house.	Unknown	12,500.00	15 00	3,200		
	Unknown	Lamp too near ceiling.	.50				
Captain Sherman	Residence and office.	Candle too near ceiling.	.25				
Soronos Tanhuco	Residence and office.	Lamp explosion		0 10			
		False alarm		0 20			
Carmen & Co.	Lighter	Broken carboy of acid.	25.00				
Compañia General de Tabacos.	Factory	Unknown	375,000.00	32 43	3,700		
Argel Tuison	Residence	Overturned lamp					

REPORT OF THE DEPARTMENT OF ASSESSMENTS AND COLLECTIONS.

DEPARTMENT OF ASSESSMENTS AND COLLECTIONS,

Manila, P. I., August 10, 1903.

GENTLEMEN: In submitting herewith the annual report covering this department for the fiscal year ending June 30, 1903, no attempt will be made to elaborate upon the work done or results accomplished. It is only intended to be a compilation of facts and figures, subdivided, naturally, by the divisions made necessary to properly handle the varied sources of revenue incident to this department, and, if it is not presuming too much, also to respectfully make a few suggestions or recommendations respecting changes in some of the laws governing the assessment and collection of the revenues of the city.

The compilation of the following statements have been carefully made under the supervision of and comparisons deduced by the Chief Deputy Collector, Mr. Ellis Cromwell, assisted by the chief clerk and cashier, Mr. C. B. Weltner.

DIVISION OF ASSESSMENTS.

The work of this division for the year ending June 30, 1903, has been of a routine character.

The assessment rolls for 1903 were prepared within the time required by law, using the same values as given in 1902.

The assessment of new improvements made during the calendar year of 1902 was carefully made, and after deducting the value of buildings destroyed a net gain of \$1,045,398.96, United States currency, is shown as per statement herewith.

These assessment rolls were completed on January 5 last, and by virtue of Act No. 581 of the United States Philippine Commission, passed January 8, 1903, providing for a board of tax revision to revise the assessments for 1903, were turned over to said board for revision.

During the past year the District of Santa Ana was added to the city's assessment roll, with real estate to the value of \$441,084.59, as was Galangin, incorporated in Tondo, with \$70,202.60, and the Malate extension, with \$7,665.99, a total of \$518,953.18, which, together with the new improvements, brought the value of the taxable real estate in the city of Manila to \$42,037,825.55, at the time the board of tax revision began its work.

Statement showing value of new improvements, by districts.

	U. S. currency.
Intramuros	\$26,005.00
Ermita	107,707.00
Malate	18,459.00
Paco	83,805.00
Santa Ana	906.00
Pandacan	2,058.00
San Miguel	56,098.00
Sampaloc	143,040.00
Santa Cruz	145,516.00
Quiapo	70,443.00
Binondo	174,718.00
Tondo	128,797.00
San Nicolas	87,846.96
Total	1,045,398.96

DIVISION OF COLLECTIONS.

Real-estate tax collections.—During the period covered by this report real-estate tax has been collected only for the calendar year 1902 and on the territory annexed to the city of Manila under the provisions of Act No. 341 of the United States Philippine Commission, amounting to one-half of 1 per cent of the assessed value for the year 1901 and $1\frac{1}{2}$ per cent for the year 1902, and the delinquent tax for the year 1901.

The collection of the taxes for the year 1903 has been delayed on account of the revision of the assessed values of all property in Manila by the board of tax revision created by Act No. 581 of the United States Philippine Commission.

The tax for the year 1902, $1\frac{1}{2}$ per cent of the assessed valuation, was collected by half years, the first half being payable without penalty in July and August and the second half at any time prior to January 1, 1903, without penalty, provided the first half had been paid within the period divided by law.

The tax on the annexed territory for the years 1901 and 1902 was payable, without penalty, during the months of October and November.

At the end of the fiscal year 1902 there were 6,377 pieces of property on which the tax for 1901 had become delinquent in the amount of \$33,853.37, United States currency. Tax has been collected on 2,738 pieces of this property, amounting to \$12,718.69, \$1,630.36 as delinquent penalty and \$159.43 as interest, making a total collected on account of 1901 of \$14,508.48.

It was found necessary to institute compulsory proceedings, as provided in Act No. 82 of the United States Philippine Commission, to enforce the collection of the delinquencies against 130 property owners. No property has been sold for taxes as yet.

Credit has been allowed on account of urbana and frontage tax paid in 1901 as follows:

Urbana	\$669.15
Frontage	4,643.86
Total credits	5,313.01

Leaving the net collections for the period covered by this report \$584,146.42.

At the end of the fiscal year 1903 taxes remained unpaid as follows: For 1901, on 3,539 pieces of property, amounting to \$21,134.68, or $5\frac{1}{2}$ per cent of the tax assessed; for 1902, on 6,204 pieces of property amounting to \$47,547.68, or $7\frac{3}{4}$ per cent of the taxes assessed.

Of this number 4,037 are pieces of property valued at \$25, United States currency, and less.

Industrial tax.—During the period covered by this report there have been issued 6,037 new patentees and 2,112 have been canceled, leaving in force on June 30, 1903, 11,511 patentees.

The collections in this period have been \$230,829.02, United States currency, against \$253,688.94 for the fiscal year ending June 30, 1902.

The decrease in collections from this source, as against those for the same period of last year, is due to the further depreciation of local currency, in which this tax is assessed and collected, and also to the fact that the tax on salaries was abolished by Act No. 497 of the United States Philippine Commission, effective January 1, 1903. The annual receipts from salary taxes amounted to about \$30,000, Mexican currency.

The number of delinquents June 30, 1903, was 1,226, and the amount of delinquency \$6,496.88, United States currency. It is estimated that about 75 per cent of this amount will have to be declared uncollectible, as many of the industries on which the taxes have been assessed have ceased and the inspectors have been unable to locate the former proprietors. In fact, these cases can not well be considered delinquencies, as in most cases the tax was paid on the industry during the time it continued, but through the failure of the owners to notify this office the tax was not discontinued when the industry ceased.

Stamps.—Internal-revenue stamps have been sold amounting to \$66,582.39, as against \$74,817.215, United States currency, collected during the fiscal year ending June 30, 1902. The decrease in the collections for this period, as against the same period of last year, is accounted for by the further depreciation of local currency, in which the stamp tax is collected, and also by the withdrawal from sale by this department of the customs stamps.

Certificates of registration.—This tax, 1 peso, is collected from all male residents of the city of Manila between the ages of 18 and 55 years, under

the provisions of section 60 of Act No. 183 of the United States Philippine Commission.

The tax for the year 1902 was payable, without penalty, during the months of May and June. During that period there were only 35,934 issued; therefore a great many persons have been required to pay, during the period covered by this report, for the year 1902, with the usual delinquent penalty of 100 per cent added, which accounts in part for the large increase from this source over that of the same period of last year.

Certificates have been issued as follows:

To persons not subject to the penalty, such as those arriving in the Islands subsequent to the date on which the penalty attached, and to persons becoming of age since that date, at 1 peso each, for 1902.....	2,427
To persons delinquent in the payment of the tax for 1902, at 2 pesos each..	31,047
For the year 1903, payable during the months of April, May, and June, 1903, at 1 peso each.....	63,920

This makes the total number of certificates of registration taken out during the period covered by this report.....	97,394
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The total amount collected was \$128,441, Mexican currency, which, reduced to United States currency at the rate of exchange at the time of the collections, amounts to \$52,088.79.

Matadero.—The ordinances requiring that all animals slaughtered for food purposes be slaughtered in the public slaughterhouse have been more rigidly enforced during the past year than at any other period since the American occupation. A very comprehensive ordinance was enacted by the Municipal Board August 23, 1902, providing for the regulation, inspection, and use of the public slaughterhouse, the provisions of which have been very well advertised. This ordinance also provides for the collection of the regular slaughterhouse fee of 3 cents per kilogram on livers, hearts, etc., on which no collection was made prior to its enactment.

During the period covered by this report there have been slaughtered in the slaughterhouse 23,385 head of cattle (all imported) and 63,599 hogs and 204 sheep, on which was collected as fees the sum of \$70,245.64, United States currency, as against \$63,273.305, United States currency, collected during the fiscal year ending June 30, 1902.

The slaughterhouse is probably one of the most successful of the city's institutions, as well as being a source of revenue. It has been kept in a cleanly condition, the refuse being carted away or cremated immediately after killing. An overhead trolley system for hanging the meat for the purpose of cleaning, weighing, and loading the same has been considered by the Board, but no action has been taken yet. Such an arrangement would be a very valuable improvement.

An inspector from the Health Department is in attendance during the hours of slaughter and all meat is carefully inspected by him. If any is

found to be infected it is immediately cremated in the slaughterhouse crematory.

The total collections for the year have been \$175,220.96, local currency, and the expenses for conducting the matadero, including salaries and wages, lighting, supplies of all kinds, and repairs, for the year have been \$14,061.23, local currency, which represents 8 per cent of the total collections.

The net revenue for the year is \$161,159.73, local currency.

Markets.—The seven public markets of the city are located as follows: Divisoria, District of Tondo; Quinta, District of Quiapo; Arranque, District of Santa Cruz; Herran, District of Malate; Anda, District of Intramuros; Sampaloc, District of Sampaloc; Santa Ana, District of Santa Ana.

Market tax is also collected from the bay and estero landings where sales are made. No tax is collected, however, on consignments of goods.

The Anda Market was thrown open to the public June 1, 1903, and at this time 87 per cent of the stalls remain unoccupied.

The number of stalls set aside for each class of goods, the average number occupied during the period covered by this report, the rate charged for stalls, and the average number of volantes or squatters in each market, with the rate charged same and number of cascos and bancas on which tax is collected, are shown in this report.

The total market collections for the period covered by this report amount to \$109,024.47, United States currency, as against \$113,070.97, for the fiscal year ending June 30, 1902, which would show a slight increase had it not been for the further depreciation in local currency, in which the tax is assessed and collected.

The following statement shows the total collections from each market, including the collections made on Manila Bay and along the banks of the esteros the actual cost of maintaining the markets and making collections, such as rent where the ground on which the markets are located is not owned by the city (which is the case only with regard to Sampaloc and Arranque Markets), labor and supplies for cleaning the markets; lighting, repairs, stationery, such as receipts, etc., and salaries paid the superintendent, inspectors, and collectors of the markets. In making this statement the salary of the superintendent has been charged as an expense of the largest market, Divisoria, and those of the inspectors against the Quinta and Arranque Markets. The statement also shows the net collections for the year and the percentage of the expenses to the collections.

It should be borne in mind that the rates charged for stalls were not established with a view of making the markets a large source of revenue to the city, but were fixed with a view of giving the public the conven-

iences afforded by public markets at a nominal rate of rental. All amounts named in this statement are in local currency:

Statement of market collections, expenses, etc.

Name of market.	Total collections.	Total ex- penses.	Net revenue.	Per- centage of ex- penses.
Divisoria	\$142,521.40	\$18,809.27	\$123,712.13	13
Quinta	62,797.96	10,291.07	52,506.89	16½
Arranque	32,042.55	12,825.26	29,217.29	40
Herran	8,470.15	2,077.11	6,393.04	24½
Anda	802.18	658.31	143.87	132
Sampaloc	6,897.49	2,138.06	4,759.43	31
Santa Ana	1,660.10	492.47	1,167.63	129½
Tetuan	3,881.63	537.79	3,343.84	14½
Bay	6,806.26	1,693.91	5,112.35	125
Estero	6,467.99	557.80	5,910.19	8½
Total	272,347.71	50,081.05	222,266.66	18½

¹ Approximate.

LICENSES.

All licenses are issued in accordance with the provisions of the Manila Liquor Licenses Act or of Ordinance No. 9, Provost-Marshall-General, as modified by amendatory acts or ordinances.

No separate accounts have been kept of receipts from liquor and business licenses, but it is estimated that the gain from last year is about equally divided between the two.

The advance from \$1.50 to \$5, local currency, for native-wine licenses, by Act No. 524 of the Commission, November 18, 1902, accounts in part for the larger receipts.

The increase in the fee, on April 1, 1903, for pawnbrokers' licenses from \$200 to \$500 resulted in a temporary increase in the revenue, but as about two-thirds of those holding licenses surrendered them when the new ordinance went into effect the receipts in the future will be about the same as formerly.

Following are comparisons between the period covered by this report and the entire fiscal year of 1902:

Licenses.	1902.	1903.	Increase.
Disapproved	198	220	22
Uncalled for	291	1,546	1,255
Issued	8,704	9,541	837
Total number of applications	9,223	11,210	1,987

Licenses issued under the Manila Liquor Licenses Act.

Class of license.	Duration of license.	1902.			1903.		
		Issued.	Transferred.	Total.	Issued.	Transferred.	Total.
First-class bar	Six months	125	16	141	120	12	132
Second-class bar	do	85	19	104	130	42	172
First-class restaurant, liquor	do	41	3	44	54	11	65
Second-class restaurant, liquor	do	38	7	45	28	4	32
First-class hotel, liquor	do	8	1	9	8	2	10
Second-class hotel, liquor	do	7	1	8	2		2
Theater, liquor	do	3		3	3	1	4
First-class wholesale, liquor	One year	60	3	63	58	4	62
Second-class wholesale, liquor	do	3		3	2		2
Third-class wholesale, liquor	do	5		5	8	1	9
Grocery, liquor	do	77		77	89	12	101
Distiller's	do	7		7	7	2	9
Druggist, liquor	do	2		2	2		2
Brewer's	do	1		1	1		1
Native wine	Six months	1,270		1,270	1,946	166	2,112
Total		1,732	50	1,782	2,458	257	2,715

Surrendered, revoked, or taken up: 1902, 31; 1903, 34.

General licenses issued under the provisions of Ordinance No. 9.

Class of license.	1902.	1903.
Business licenses	5,189	6,826
Entertainment licenses (daily)	2,438	1,110
Peddlers' licenses (quarterly)	9,164	6,976
Surrendered, taken up, or revoked	264	243

The total number of liquor licenses in effect at the end of the fiscal year is shown, by districts, in this report.

There are 25 licensed clubs where liquor is sold to members. There are 1,480 places where liquor is sold, exclusive of clubs.

Total number of places where liquor is sold for consumption on the premises or drinking places.

District.	Total population.	Number of places.	Number of licenses. ¹
Tondo	39,045	319	8.17
Binondo	45,772	331	7.23
Santa Cruz	35,040	190	5.42
Quiapo	11,049	116	6.99
San Miguel	8,838	40	4.52
Sampaloc	18,779	119	6.33
Intramuros	11,463	58	5.59
Ermita	12,226	30	2.45
Malate	8,858	9	1.01
Paco	6,725	75	11.15
Santa Ana	3,182	17	5.34
Pandacan	2,983	21	7.04
Total	203,960	1,325	6.49

¹ Per 1,000 of population.

Places where liquor is sold on premises or drinking places other than native wine.

District.	Ameri- can, Eu- ropean, and for- eign pop- ulation.	Number of places.	Number of licenses. ¹
Tondo	222	1	4.50
Binondo	1,551	39	25.15
Santa Cruz	1,144	13	11.35
Quiapo	592	19	32.01
San Miguel	561	1	1.78
Sampaloc	808	60	74.26
Intramuros	2,029	16	7.68
Ermita	1,137	23	2.63
Malate	333	23	9.01
Paco	332	2	6.02
Total	8,709	157	18.02

¹ Per 1,000 of population.

² Bars closed July 1, 1903.

Total number of native-wine shops.

District.	Filipino and Chi- nese pop- ulation.	Number of places.	Number of licenses. ¹
Intramuros	9,434	42	4.45
Binondo	44,221	292	6.60
Tondo	38,823	318	8.19
Santa Cruz	33,896	177	5.22
Sampaloc	17,971	59	3.28
San Miguel	8,277	39	4.71
Quiapo	10,557	97	9.19
Ermita	11,089	27	2.43
Paco	6,393	73	11.43
Malate	8,525	6	.70
Pandacan	2,983	21	7.04
Santa Ana	3,182	17	5.34
Total	195,351	1,168	5.98
Filipinos only	174,248	1,168	6.70

¹ Per 1,000 of population.

Vehicle licenses.—The number of public vehicle licenses issued in the city of Manila during the period covered by this report was 2,389, including cart licenses, of which 1,232 were new licenses and 1,157 renewal licenses. There were 289 transfers, 300 duplicates issued, and 132 surrendered. The total collected from this source was \$8,711.50.

Dog licenses.—Dog licenses were issued as follows: Seven hundred and thirty-six male, 245 female; 29 duplicates, and 30 surrendered. The fees collected amounted to \$1,387.74.

Bicycle licenses.—There were 691 new bicycle licenses issued, 7 renewals, and 8 duplicates and 3 surrendered. The fees collected aggregate \$896.84.

During the period covered by this report there has been collected for license fees of all kinds \$164,820.45, against \$168,987.88 collected for the fiscal year 1902, showing a loss of \$4,167.43.

Live-stock registration.—During the year there have been registered 4,750 animals, at a fee of 20 cents, Mexican, each, and 3,302 animals have

been transferred at a fee of 10 cents, Mexican, each, making a total collected from this source during the period covered by this report \$506.71, United States currency, as against \$629.70 for the fiscal year 1902.

This system of registration has proved of valuable assistance to the police and others in locating horses and other animals which have been stolen or strayed.

Vehicle tax.—Vehicle tax has been paid during the period covered by this report on 611 carriages, at \$12, Mexican, per year each; on 2,118 carromatas, at \$6, Mexican, per year each; on 946 carretelas, at \$6, Mexican, per year each; on 1,008 carretons, at \$6, Mexican, per year each, and on 673 other two-wheeled vehicles, such as calesas and quieiez, at \$9, Mexican per year each. Tax has also been collected on 2,353 excess horses and 64 excess carabaos. This tax is collected on all vehicles except those in use for official purposes or owned by foreign consuls, whether the vehicles be for private or public use.

In assessing the tax on vehicles the number of animals required to draw the vehicles are exempt from taxation, but all animals not necessary to draw the vehicles are considered excess and the owners are required to pay taxes on the same at the rate of \$6, Mexican, per year each. From this it will be seen that the tax is really assessed on the animals instead of the vehicles, the tax having been paid during the period on 8,383 animals, 7,312 of which are horses and 1,072 carabaos. The collections from this source amount to \$20,952.81, United States currency, as against \$24,587.855 for the fiscal year 1902, which, considering the depreciation of local currency, in which the tax is assessed and collected, shows a slight increase over last year.

On June 30, 1903, 839 persons were delinquent in the payment of this tax, the amount of delinquency being \$1,939.14, United States currency.

Vehicle equipment.—Vehicle equipment consists of staff, disc, number plate, and driver's badge, which are furnished by this office under the provisions of section 7 of Ordinance No. 9, at a cost to the purchaser of 75 cents, United States currency, for each complete outfit. Duplicates are furnished upon application at cost price. During the period of this report there have been furnished 1,232 complete sets, amounting to \$393.20, United States currency, making a total of \$1,317.20.

Rents of city property.—During the period covered by this report rent has been collected from 85 persons and firms occupying city property, amounting to \$4,509.18, United States currency, as against \$2,903.13 for the same period last year.

Of this number 76 have no leases or contracts and 9 have leases; 20 are occupying apartments in the public tenement house, Calle Valdarama.

The monthly rental for the month of June, 1903, was \$221.83, United States currency, and \$1,093.11, Mexican currency.

Municipal Court costs, etc.—These costs, fines, fees, and receipts are

accepted and receipted for under the provisions of section 61 of the Manila Charter.

The amounts received from the above-mentioned sources, during the period covered by this report, are as follows:

	U. S. currency.
Municipal Court costs, fines, and fees.....	\$62,691.87
Justice of peace court costs, fines, and fees.....	1,899.39
Sheriff's fees	3,566.89
City Attorney's fees.....	109.54
City electrician's fees.....	1,673.81
Pound receipts	941.66
Registration of cocheros fees.....	1,119.15
Board of Health fees.....	4,065.33
Total	76,067.64

Miscellaneous collections made during the fiscal year 1903.

[Amounts stated in United States currency.]

Date.	Name.	For what purpose collected.	Amount.
1902.			
July 2	Manila Telephone Com- pany.	7 per cent of gross receipts for quarter ending Mar. 31, 1903; \$763.20, Mexican, at \$2.27 for \$1.	\$336.21
July 2	Martin Fernando.....	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of June, 1902; \$20, Mexican, at \$2.27 for \$1.	8.81
Aug. 2	do	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of July, 1902; \$19, Mexican, at \$2.35 for \$1.	8.09
Sept. 2	do	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of August, 1902; \$1, Mexican, at \$2.35 for \$1.	7.66
Oct. 1	do	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of September, 1902, \$18, Mexican, at \$2.40 for \$1.	7.50
Oct. 17	Manila Telephone Com- pany.	7 per cent of gross receipts for quarter ending June 30, 1902; \$811.15, Mexican, at \$2.40 for \$1.	337.98
Nov. 3	Martin Fernando.....	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of October, 1902; \$19, Mexican, at \$2.46 for \$1.	7.72
Dec. 1	do	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of November, 1902; \$19, Mexican, at \$2.60 for \$1.	7.31
Dec. 10	Genario Heredia	In payment of parcel of land extending 3 meters along Calle Soler; 115.55 meters along the unnamed street leading to Arraque Market, known as "Calle Para el Mercado," which land was sold by resolution of the Municipal Board on Aug. 8, 1902; \$526.97, Mexican, at \$2.60 for \$1.	202.68
1903.			
Jan. 3	Martin Fernando.....	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of December, 1902; \$30, Mexican, at \$2.60 for \$1.	11.54
Jan. 20	Manila Telephone Com- pany.	7 per cent of gross receipts for quarter ending Sept. 30, 1902; \$750.87, Mexican, at \$2.60 for \$1.	288.80
Feb. 2	Martin Fernando.....	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of January, 1903; \$22, Mexican, at \$2.66 for \$1.	8.27
Feb. 3	Manila Telephone Com- pany.	7 per cent of gross receipts for fourth quarter, calendar year 1902; \$924.30, Mexican, at \$2.66 for \$1.	347.48
Feb. 7	do	Sale of condemned office furniture; \$13.30, Mexican, at \$2.66 for \$1.	5.00

Miscellaneous collections made during the fiscal year 1903—Continued.

Date.	Name.	For what purpose collected.	Amount.
1903. Feb. 12	José Manchucha -----	For piece of land situated on Calle Azearraga between Calles Antonio Rivera and Reina Regente, immediately in front of a piece of land owned by José Manchucha; this land, containing 35.34 square meters, was sold by resolution of the Municipal Board on Feb. 12, 1903; United States currency, \$255, plus \$18.99, Mexican, at \$2.66 for \$1.	\$262.14
Mar. 2	Martin Fernando -----	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of February, 1903; \$23, Mexican, at \$2.66 for \$1.	8.65
Apr. 1	-----do -----	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of March, 1903; \$25, Mexican, at \$2.60 for \$1.	9.61
May 2	-----do -----	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of April, 1903; \$24, Mexican, at \$2.50 for \$1.	9.60
June 1	-----do -----	For privilege of operating a line of small ferry-boats between Santa Ana and San Felipe for month of May, 1903; \$30, Mexican, at \$2.45 for \$1.	12.24
June 26	Manila Telephone Company.	7 per cent of gross receipts for first quarter of calendar year, 1903; \$1,051.27, Mexican, at \$2.45 for \$1.	429.09
	Total -----		2,316.38

Total collections.—The total collections for the period covered by this report amount to \$1,383,407.11, United States currency, as against \$1,094,654.01, United States currency, collected from the same sources during the fiscal year ending June 30, 1902.

In order to make this comparison it was necessary to add to the amount collected by the City Assessor and Collector from August 7, 1901, to June 30, 1902, the collections for the month of July and six days in August, 1901, made by the collector of internal revenue of Manila and the department of licenses and municipal revenue, which offices were combined August 7, 1901, to form the present Department of Assessments and Collections.

The collections for this period fall short of the estimate made and submitted with the last annual report to the extent of \$348,792.98, United States currency, which is accounted for by the fact that the collection of the first half of the real-estate taxes for the year 1903 has been postponed by Executive Order No. 19, on account of the assessment of the real estate of the city being revised by the board of tax revision under the provisions of Act No. 581 of the United States Philippine Commission.

CURRENT EXPENSES.

The expenses of the department during the fiscal year have been as follows:

Salaries and wages:

Regular force	\$59,610.20
Emergency force, from July 1, 1902, to January 1, 1903.....	11,660.28

Total salaries and wages	71,270.48
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Regular supplies, such as stationery, office furniture, fixtures, books, registers, tax rolls, forms, instruments, tracing cloths, equipment for public vehicles, etc.....	9,357.13
Incidental expenses, such as coolie hire, advertising taxes due and delinquent, repairs to office furniture and fixtures, typewriters, etc....	472.44

Of the last amount \$210 was paid to the Treasurer of the Philippine Islands for certificates of registration. The sum of \$427.47 was expended for transportation used by the employees of this department on official business. The department is furnished only two carromatas by the Insular Purchasing Agent, which is considered inadequate.

Tax refunds have been made as follows:

8 refunds on account of the overpayment of real-estate taxes.....	\$642.30
3 refunds on account of the overpayment of industrial taxes.....	29.16
4 refunds on account of the overpayment of frontage tax paid in 1901.....	39.71
1 refund on account of money deposited by the poundkeeper for one horse sold, which funds were not withheld by this office, as is provided for in Ordinance No. 36.....	5.80
Total	716.97

The total expenses for the period amount to \$82,244.49, which represents about 5.9 per cent of the total collections.

PERSONNEL.

The authorized regular force on July 1, 1902, was 99 superintendents, clerks, inspectors, market collectors, and laborers, consisting of 22 Americans and 77 natives, with monthly pay roll aggregating \$6,162.19.

There was also authorized an emergency force of 9 Americans and 32 natives, with pay roll amounting to \$2,194.17 monthly, making a total monthly pay roll of \$8,356.36. However, the entire force authorized was not employed, the average monthly pay roll being \$5,105.87.

The emergency force was abolished January 1, 1903, and the vacancies thus created filled in accordance with the civil-service rules.

During the period covered by this report 26 employees of the civil service have resigned, 13 have been discharged, 2 died. Four leaves have been granted with permission to visit the United States, one for 52 days, one for 66 days, one for 53 days, and one for 57 days. In addition 80 employees have been granted leaves aggregating 595 days, with pay, and one employee 25 days' leave without pay.

During the greater part of the six months that the present incumbent has occupied the responsible position of chief of the department he has been obliged to give a large share of his time to the work assigned to him by the Civil Governor upon the board of tax revision, and as a consequence has not been able to give the close attention to the details of the duties of the office that he otherwise could and would have done. However, the work has been efficiently carried on by his able deputies and the

chiefs of the various divisions. The hearty coöperation accorded him at all times from these sources is worthy of remark and appreciated to the fullest measure.

The suggestions referred to in the beginning of this report to which I would ask your attention and favorable consideration, are:

That the laws with reference to the collection of the industrial tax and the vehicle tax, now payable quarterly, be changed to semiannual payments—say, on the 1st of January and July—attaching penalty to the delinquent payments after the 1st of March and September, respectively. No inconsiderable expense would be saved by such modification of the laws, and would, it is believed, better satisfy the taxpayers, both large and small.

The law governing the collection of the cedula or registration tax should be uniform throughout, at least, the Island of Luzon. Otherwise it is possible for a delinquent in one province to step over into the adjacent province and get his cedula without the penalty. This possibility would seem remote were it not for the fact that one day late in June application was made to this office for nearly 1,000 cedulas for persons living in an adjoining province, in which the penalty had already attached, and there is little doubt that many pesos were received from and cedulas issued to persons representing themselves as residents of Manila, who lived and should have taken out their cedulas elsewhere.

It is further suggested that in the license department changes in existing laws and ordinances might be made that would inure to the benefit of both the contributors and the city.

However, the above are intended only as brief suggestions or recommendations for the purpose of getting your attention and possible favorable consideration. No argument or detailed plan need be submitted at this time, but should any of the foregoing suggestions sufficiently interest your honorable body to invite discussion this office will cheerfully respond to the invitation.

Another suggestion, and one for which no apology is needed, is that better accommodations and facilities be given the department for waiting upon the public. It is oftentimes absolutely impossible to wait upon the public with anything like the dispatch that the taxpayer is entitled to expect. He comes with his money to pay his contribution, and of necessity, under present conditions, is obliged to wait and wait for his turn to be waited upon. This inconvenience and delay is in part, at least, due to the poor arrangement of the office.

Facilities should be such that the least possible inconvenience and delay need be imposed upon the taxpayers. In this connection it should be borne in mind that this department is to a greater extent than that of any other, municipal or insular, a public office—that is to say, its whole business, exclusive of the assessment department, is that of serving the

public. Nearly every employee is working under a strain incident to the demands of the many who are impatiently waiting for their money to be taken and properly receipted for, or is sitting idle for days when little or no business is done or to be done. There is very little work that can accumulate in any except the assessment division to keep the employees occupied when not in demand by the tax contributors. In this respect it is unlike any other department. The rushes are periodical, according to the approach of the penalty-attaching period. The fact is that the department has too limited a force during the busy seasons and too large a number during the less busy periods.

This is the direct result of being confined to the estimate given and appropriations made for a given six months for a fixed personnel. The old system of allowing "emergency men" as necessity required was well adapted for this department and should be restored to it. Money would be saved thereby and the public much better accommodated.

With a few substantial changes in the arrangement of the interior of the building occupied by this department, together with a more elastic provision for the personnel of the office as to number, less complaint would be heard from the taxpayers, better work would be done, and expenses saved.

Respectfully submitted.

A. W. HASTINGS,
City Assessor and Collector.

The MUNICIPAL BOARD,

Manila, P. I.

Annual statement of receipts and disbursements during the fiscal year 1903, showing collections in Mexican currency reduced to United States currency at rate at which receipts collected and consolidated with collections in United States currency.

RECEIPTS.

Source of revenue.	First quarter.			
	July.	August.	September.	Total.
Land tax	\$43,257.20	\$259,053.58	\$16,044.07	\$318,354.85
Industrial tax	47,089.05	3,786.22	1,194.54	52,069.81
Stamp sales	5,565.11	5,035.59	5,692.93	16,293.63
Certificates of registration	3,632.88	3,408.92	849.10	7,890.90
Matadero tax	5,520.07	5,227.15	6,015.92	16,763.14
Market tax	7,558.80	8,295.48	9,371.95	25,226.23
Licenses	16,491.74	7,514.76	12,377.20	36,383.70
Live stock registration	38.65	28.85	34.68	102.18
Vehicle tax	4,431.31	315.75	449.11	5,196.17
Vehicle equipment	106.15	85.21	60.88	252.24
Municipal Court fees and fines	3,741.01	2,880.93	3,529.28	10,151.22
Justice of peace court fees and fines	113.63	128.05	135.11	376.79
Sheriff's fees	222.13	217.97	251.45	691.55
City Attorney's fees	6.38		73.28	79.66
Rents	342.67	295.23	189.69	827.59
Miscellaneous	345.02	8.09	7.66	360.77
Certificates of installation	186.50	132.00	135.48	453.98
Pound receipts	54.83	65.29	10.00	130.12
Registration of cocheros	6.50		77.50	84.00
Total	138,709.63	296,479.07	56,499.83	491,688.53

Annual statement of receipts and disbursements during the fiscal year 1903, etc.—Cont'd.

RECEIPTS—Continued.

Source of revenue. ¹	Second quarter.			
	October.	November.	December.	Total.
Land tax	\$31,522.77	\$64,732.74	\$139,945.22	\$236,200.73
Industrial tax	47,601.31	2,689.58	2,465.53	52,756.42
Stamp sales	5,817.83	5,020.94	5,330.58	16,169.35
Certificates of registration	1,335.12	940.89	784.62	3,060.63
Matadero tax	6,274.35	5,591.57	6,076.60	17,942.52
Market tax	9,271.38	8,623.23	9,910.03	27,804.64
Licenses	11,096.66	7,889.28	28,413.34	47,399.28
Live-stock registration	59.28	44.70	32.73	136.71
Vehicle tax	4,038.27	438.57	357.88	4,834.72
Vehicle equipment	120.55	104.65	72.59	297.79
Municipal Court fees and fines	3,282.91	7,029.77	4,969.80	15,282.48
Justice of peace court fees and fines	126.77	141.29	140.50	408.56
Sheriff's fees	237.95	292.43	317.77	848.15
City Attorney's fees	1.50		7.31	8.81
Rents	406.03	314.34	504.88	1,225.25
Miscellaneous	345.48	7.72	209.99	563.19
Certificate of installation	130.26		161.07	291.33
Pound receipts	48.29	31.97	79.67	159.93
Registration of cocheros		95.77	37.75	133.52
Total	121,716.71	103,989.44	199,817.86	425,524.01

Source of revenue.	Third quarter.			
	January.	February.	March.	Total.
Land tax	\$11,313.36	\$11,204.43	\$1,592.35	\$24,110.14
Industrial tax	47,393.53	7,160.52	15,450.26	70,004.31
Stamp sales	5,688.75	4,335.05	6,980.74	17,004.54
Certificates of registration	712.52	336.09	1,347.48	2,396.09
Matadero tax	5,883.71	5,124.64	5,978.24	16,986.59
Market tax	8,960.45	8,289.16	9,764.35	27,013.96
Licenses	14,864.72	8,272.75	14,350.02	37,487.49
Live-stock registration	46.98	43.12	47.21	137.31
Vehicle tax	4,031.51	796.99	730.82	5,559.32
Vehicle equipment	123.12	139.23	130.00	392.35
Municipal Court fees and fines	5,372.15	5,336.26	7,452.06	18,160.47
Justice of peace court fees and fines	292.93	137.11	168.08	598.12
Sheriff's fees	439.65	317.31	296.45	1,053.41
City Attorney's fees	12.65	8.42		21.07
Rents	380.43	310.26	359.08	1,049.77
Miscellaneous	300.33	622.89	8.65	931.87
Certificate of installation	205.00		334.75	539.75
Pound receipts	154.69	138.37	95.34	388.40
Registration of cocheros	15.75	299.75	325.25	640.75
Public health fees		1,602.08	652.04	2,254.12
Total	106,192.23	54,474.43	66,063.17	226,729.83

Source of revenue.	Fourth quarter.			
	April.	May.	June.	Total.
Land tax	\$520.80	\$723.87	\$4,236.03	\$5,480.70
Industrial tax	44,881.40	7,311.27	3,805.81	55,998.48
Stamp sales	4,734.70	5,922.60	6,457.57	17,114.87
Certificates of registration	8,582.02	10,477.93	19,681.22	38,741.17
Matadero tax	5,666.11	5,967.92	6,919.36	18,553.39
Market tax	8,804.60	9,173.49	11,001.55	28,979.64
Licenses	13,952.75	5,891.09	23,706.14	43,549.98
Live-stock registration	57.67	40.64	32.20	130.51
Vehicle tax	3,997.83	747.02	617.75	5,362.60
Vehicle equipment	143.51	109.13	122.18	374.82
Municipal Court fees and fines	6,440.48	6,144.14	6,513.08	19,097.70
Justice of peace court fees and fines		329.05	186.87	515.92
Sheriff's fees	338.25	313.38	322.15	973.78
Rents	415.43	428.62	562.52	1,406.57
Miscellaneous	9.62	9.60	441.34	460.56
Certificate of installation	111.25	140.00	137.50	388.75
Pound receipts	143.64		119.57	263.21
Registration of cocheros	89.71		171.17	260.88
Public health fees	495.66	707.04	608.51	1,811.21
Total	99,385.43	54,436.79	85,642.52	239,464.74

¹ See statement of deposits as made in United States and Mexican currency.

Annual statement of receipts and disbursements during the fiscal year 1903, etc.—Cont'd.

RECEIPTS—Continued.

Source of revenue.	Total fiscal year—		Estimated collections during fiscal year 1904.
	1903.	1902.	
Land tax.....	\$584,146.42	\$305,831.26	\$1,100,000.00
Industrial tax.....	230,829.02	199,524.33 $\frac{1}{2}$	240,000.00
Stamp sales.....	66,582.39	68,510.03 $\frac{1}{2}$	70,000.00
Certificates of registration.....	52,088.79	51,000.34	45,000.00
Matadero tax.....	70,245.64	57,078.35 $\frac{1}{2}$	75,000.00
Market tax.....	109,024.47	102,107.79	120,000.00
Licenses.....	164,820.45	153,204.53 $\frac{1}{2}$	170,000.00
Live-stock registration.....	506.71	525.15	600.00
Vehicle tax.....	20,952.81	18,591.48 $\frac{1}{2}$	25,000.00
Vehicle equipment.....	1,317.20	1,434.08	1,250.00
Municipal Court fees and fines.....	62,691.87	78,222.07	60,000.00
Justice of peace court fees and fines.....	1,899.39	1,666.94 $\frac{1}{2}$	2,200.00
Sheriff's fees.....	3,566.89	2,215.64	4,500.00
City Attorney's fees.....	109.54	24.83	150.00
Rents.....	4,509.18	2,656.21	5,000.00
Miscellaneous.....	2,316.39	4,838.81 $\frac{1}{2}$	2,000.00
Certificates of installation.....	1,673.81	951.50	1,500.00
Pound receipts.....	941.66	170.90	1,000.00
Registration of cocheros.....	1,119.15		750.00
Frontage tax.....		21,592.36 $\frac{1}{2}$	
Azcarraga improvement fund.....		489.95	
Public health fees.....	4,065.33		8,000.00
Total.....	1,383,407.11	1,070,636.59	1,931,950.00

¹ Including from August 7, 1901, to June 30, 1902.

DISBURSEMENTS.

Disposition of funds received. ¹	First quarter.			
	July.	August.	September.	Total.
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer.....	\$1,116.53	\$1,017.81	\$147.82	\$2,281.16
Incidental expenses.....	30.46	40.21	8.12	78.79
Transportation.....	34.29	27.50	37.37	99.16
Salaries and wages—				
Regular.....	3,880.73	4,228.73	4,331.62	12,441.08
Emergency.....	2,164.82	1,962.56	1,895.82	6,023.20
Total.....	7,226.83	7,276.81	6,420.75	20,924.39

Disposition of funds received. ¹	Second quarter.			
	October.	November.	December.	Total.
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer.....	\$962.94	\$451.01	\$490.56	\$1,904.51
Incidental expenses.....		89.99	11.60	101.59
Transportation.....		30.10	83.99	114.09
Salaries and wages—				
Regular.....	4,613.18	4,275.01	4,792.93	13,681.12
Emergency.....	1,769.99	2,035.00	1,832.09	5,637.08
Tax refunds.....		289.94		289.94
Total.....	7,346.11	7,171.05	7,211.17	21,728.33

Disposition of funds received. ¹	Third quarter.			
	January.	February.	March.	Total.
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer.....	\$316.06	\$652.43	\$1,376.61	\$2,345.10
Incidental expenses.....	10.38	153.80	8.16	172.34
Transportation.....	32.36	31.18	28.88	92.42
Salaries and wages, regular.....	5,407.84	5,405.54	5,726.85	16,540.23
Tax refunds.....	427.03			427.03
Total.....	6,193.67	6,242.95	7,140.50	19,577.12

¹ See statement of deposits as made in United States and Mexican currency.

Annual statement of receipts and disbursements during the fiscal year 1903, etc.—Cont'd.

DISBURSEMENTS—Continued.

Disposition of funds received. ¹	Fourth quarter.			
	April.	May.	June.	Total.
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer	\$1,029.63	\$352.64	\$1,443.09	\$2,825.36
Incidental expenses	11.64	2.00	106.08	119.72
Transportation	40.47	31.06	50.27	121.80
Salaries and wages, regular	5,425.24	5,631.92	5,890.61	16,947.77
Total	6,506.98	6,017.62	7,490.05	20,014.15

Disposition of funds received. ¹	Total fiscal year—		Estimated expenses during fiscal year 1904.
	1903.	1902.	
Expense:			
Regular supplies, Insular Purchasing Agent and Public Printer	\$9,357.13	\$10,670.50½	\$10,500.00
Incidental expenses	472.44	382.89	376.00
Transportation	427.47	487.22	720.00
Salaries and wages—			
Regular	59,610.20	50,826.55	77,760.00
Emergency	11,660.28	33,309.90	
Tax refunds	716.97	16.00 8.00	2,000.00
Total	82,244.49	95,701.06½	91,356.00

¹ See statement of deposits as made in United States and Mexican currency.

Annual statement of receipts and disbursements, in United States currency, during the fiscal year 1903.

RECEIPTS.

Source of revenue.	First quarter.			
	July.	August.	September.	Total.
Land tax	\$43,257.20	\$185,249.84	\$4,895.28	\$233,402.32
Industrial tax	47,089.05	3,118.40	179.54	50,386.99
Stamp sales	5,565.11	8,271.13	108.32	8,944.56
Certificates of registration	3,682.88	2,917.01		6,549.89
Matadero tax	5,520.07	3,118.13		8,638.20
Market tax	7,558.80	5,326.34		12,885.14
Licenses	16,491.74	6,237.28	2,950.74	25,679.76
Live stock registration	38.65	18.34		56.99
Vehicle tax	4,431.31	240.75	5.00	4,677.06
Vehicle equipment	106.15	63.45	6.55	176.15
Municipal Court fees and fines	3,741.01	2,661.45	1,332.59	7,735.05
Justice of peace court fees and fines	113.63	128.05		241.68
Sheriff's fees	222.13	217.97		440.10
City Attorney's fees	6.38			6.38
Rents	342.67	208.67		551.34
Miscellaneous	345.02	8.09		353.11
Certificates of installation	186.50	121.00	69.50	377.00
Pound receipts	54.83	65.29		120.12
Registration of cocheros	6.50		47.00	53.50
Total	138,709.63	212,971.19	9,594.52	361,275.34

Annual statement of receipts and disbursements, in United States currency, etc.—Cont'd.

RECEIPTS—Continued.

Source of revenue.	Second quarter.			
	October.	November.	December.	Total.
Land tax	\$9,531.32	\$6,907.75	\$96,183.29	\$112,622.36
Industrial tax	5,690.11	208.40	153.28	6,051.79
Stamp sales	127.83	126.36	908.59	1,162.78
Licenses	3,433.88	2,555.90	9,926.13	15,915.91
Vehicle tax		10.00		10.00
Vehicle equipment	2.50	.15	10.10	13.75
Municipal Court fees and fines	370.89	751.86	1,434.77	2,557.52
Rents		7.50	215.60	223.10
Certificates of installation	117.60		104.50	222.10
Pound receipts	14.50	7.50		22.00
Total	19,288.63	10,575.42	108,937.26	138,801.31

Source of revenue.	Third quarter.			
	January.	February.	March.	Total.
Land tax	\$10,411.57	\$10,172.41	\$1,539.01	\$22,122.99
Industrial tax	12,800.85	1,528.69	7,338.27	21,727.81
Stamp sales	1,580.13	1,501.35	3,791.71	6,873.19
Licenses	9,314.20	5,587.68	10,420.75	25,322.63
Vehicle tax			98.46	98.46
Vehicle equipment	50.05	86.80	82.76	219.61
Municipal Court fees and fines	1,737.61	1,127.40	2,304.45	5,169.46
Sheriff's fees		34.45	11.22	45.67
Rents		32.65	108.03	140.68
Miscellaneous		255.00		255.00
Certificates of installation	205.00		334.75	539.75
Pound receipts	9.75	40.00	17.50	67.25
Registration of cocheros			78.00	78.00
Public-health fees		154.80	197.75	352.55
Total	36,109.16	20,521.23	26,382.66	83,013.05

Source of revenue.	Fourth quarter.				Total fiscal year—	
	April.	May.	June.	Total.	1903.	1902.
Land tax	\$504.46	\$567.14	\$4,233.05	\$5,304.65	\$373,452.32	\$305,831.26
Industrial tax	25,035.17	5,057.56	1,571.34	31,664.07	109,830.66	199,524.33½
Stamp sales	2,551.56	3,460.56	3,570.69	9,582.81	26,363.34	68,510.09½
Certificates of registration	211.13	1,186.96	1,128.55	2,526.64	9,076.53	51,000.34
Matadero tax		209.00	27.00	236.00	8,874.20	57,078.35½
Market tax	50.00	88.00	320.25	458.25	13,343.39	102,107.79
Licenses	11,101.70	5,063.90	19,207.98	35,373.58	102,291.88	153,204.53½
Live stock registration	1.00			1.00	57.99	525.15
Vehicle tax	472.27	76.29	12.56	561.11	5,346.63	18,591.48½
Vehicle equipment	58.80	81.40	99.30	239.50	649.01	1,434.08
Municipal Court fees and fines	2,580.50	2,667.00	1,815.00	7,062.50	22,524.53	78,222.07
Justice of peace court fees and fines					241.68	1,666.94½
Sheriff's fees	33.95	46.62	35.30	115.87	601.64	2,215.64
City Attorney's fees					6.38	24.83
Rents	87.14	53.70	287.95	428.79	1,343.91	2,656.21
Miscellaneous					608.11	4,838.81½
Certificates of installation	111.25	140.00	137.50	388.75	1,527.60	951.50
Pound receipts	22.50		52.00	74.50	283.87	170.90
Registration of cocheros	7.00		21.50	28.50	160.00	
Frontage tax						21,592.36½
Ascarraga improvement fund						489.95
Public-health fees	92.50	156.00	106.00	354.50	707.05	
Total	42,920.93	18,854.13	32,625.96	94,401.02	677,490.72	1,070,636.59

¹Including from August 7, 1901, to June 30, 1902.

See consolidated statement for estimated collections during fiscal year 1904.

Annual statement of receipts and disbursements, in United States currency, etc.—Cont'd.

DISBURSEMENTS.

Disposition of funds received.	First quarter.			
	July.	August.	September.	Total.
Deposited with Treasurer	\$175,556.74	\$189,632.70	\$41,747.00	\$406,936.44
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer	1,116.53	1,017.81	147.82	2,282.16
Incidental expenses	30.46	40.21	8.12	78.79
Transportation	34.29	27.50	37.37	99.16
Salaries and wages—				
Regular	3,880.73	4,228.73	4,331.62	12,441.08
Emergency	2,164.82	1,962.56	1,895.82	6,023.20
Total	7,226.83	7,276.81	6,420.75	20,924.39

¹ July 7, lost by exchange (Mexican rate of \$2.27 for \$1 United States currency changed to \$2.35), \$8.15; balance from June 30, \$46,380.05.

Disposition of funds received.	Second quarter.			
	October.	November.	December.	Total.
Deposited with Treasurer	\$19,287.71	\$11,263.57	\$65,872.18	\$96,423.46
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer	962.94	451.01	490.56	1,904.51
Incidental expenses		89.99	11.60	101.59
Transportation		30.10	83.99	114.09
Salaries and wages—				
Regular	4,613.18	4,275.01	4,792.93	13,681.12
Emergency	1,769.99	2,035.00	1,832.09	5,637.08
Tax refunds		289.94		289.94
Total	7,346.11	7,171.05	7,211.17	21,728.33

Disposition of funds received.	Third quarter.			
	January.	February.	March.	Total.
Deposited with Treasurer	\$77,593.03	\$21,810.31	\$25,696.23	\$125,099.57
Expense:				
Regular supplies, Insular Purchasing Agent and Public Printer	316.06	652.42	1,376.61	2,345.10
Incidental expenses	11.64	106.08	8.16	172.34
Transportation	32.36	31.18	28.88	92.42
Salaries and wages, regular	5,407.84	5,405.54	5,726.85	16,540.23
Tax refunds	427.03			427.03
Total	6,193.67	6,242.95	7,140.50	19,577.12

Disposition of funds received.	Fourth quarter.				Total fiscal year—	
	April.	May.	June.	Total.	1903.	1902
Deposited with Treasurer	\$38,811.78	\$23,007.83	\$30,586.95	\$92,406.56	\$720,866.03	-----
Expense:						
Regular supplies, Insular Purchasing Agent and Public Printer	1,029.63	352.64	1,443.09	2,825.36	9,357.13	\$10,670.50 ¹
Incidental expenses	11.64	2.00	106.08	119.72	472.44	382.89
Transportation	40.47	31.06	50.27	121.80	427.47	487.22
Salaries and wages—						
Regular	5,425.24	5,631.92	5,890.61	16,947.77	59,610.20	50,826.55
Emergency					11,660.28	33,309.90
Miscellaneous					716.97	16.00
Tax refunds						8.00
Total	6,506.98	6,017.62	7,490.05	20,014.15	82,244.49	95,701.06 ¹

See consolidated statement for estimated expenses during fiscal year 1904.

Annual statement of receipts and disbursements, in Mexican currency, during the fiscal year 1903.

RECEIPTS.

Source of revenue.	First quarter.			
	July.	August.	September.	Total.
Land tax		\$173,438.80	\$26,287.27	\$199,726.07
Industrial tax		1,569.37	2,398.34	3,967.71
Stamp sales		4,146.49	13,196.02	17,342.51
Certificates of registration		1,156.00	2,004.00	3,160.00
Matadero tax		4,956.20	14,233.66	19,189.86
Market tax		6,977.48	22,182.11	29,159.59
License tax		3,002.08	22,222.47	25,224.55
Licenses		24.70	82.20	106.90
Live-stock registration		176.25	1,051.50	1,227.75
Vehicle tax		51.13	128.41	179.54
Vehicle equipment		515.77	5,191.97	5,707.74
Municipal Court fees and fines			317.50	317.50
Justice of peace court fees and fines			590.91	590.91
Sheriff's fees			172.20	172.20
City Attorney's fees		203.42	446.88	650.30
Rents			18.00	18.00
Miscellaneous		25.85	155.18	181.03
Certificates of installation			23.50	23.50
Pound receipts			71.68	71.68
Registration of cocheros				
Total		196,243.54	110,773.80	307,017.34

Source of revenue.	Second quarter.			
	October.	November.	December.	Total.
Land tax	\$53,164.94	\$146,611.20	\$113,781.01	\$313,557.15
Industrial tax	101,602.48	6,204.74	6,011.84	113,819.06
Stamp sales	13,779.57	12,253.43	11,497.18	37,530.18
Certificates of registration	3,244.00	2,348.00	2,040.00	7,632.00
Matadero tax	15,172.24	14,003.24	15,799.22	44,974.70
Market tax	22,411.98	21,617.37	25,766.08	69,795.43
License tax	18,511.67	13,385.49	48,066.74	79,963.90
Licenses	143.70	111.60	85.10	340.40
Live-stock registration	9,808.00	1,066.75	930.50	11,805.25
Vehicle tax	287.19	261.42	159.87	708.48
Vehicle equipment	7,059.08	15,581.44	9,191.07	31,831.59
Municipal Court fees and fines	304.25	347.57	365.31	1,017.13
Justice of peace court fees and fines	571.10	719.38	826.19	2,116.67
Sheriff's fees	3.60		19.00	22.60
City Attorney's fees	982.53	760.60	752.13	2,495.26
Rents	829.15	19.00	545.97	1,394.12
Miscellaneous	30.70		147.08	177.78
Certificates of installation	81.09	60.20	207.13	348.42
Pound receipts		235.60	98.15	333.75
Registration of cocheros				
Total	247,987.27	235,587.03	236,289.57	719,863.87

Source of revenue.	Third quarter.			
	January.	February.	March.	Total.
Land tax	\$2,356.69	\$2,745.17	\$140.04	\$5,241.90
Industrial tax	90,717.13	14,980.66	20,979.80	126,677.59
Stamp sales	10,746.95	7,537.64	8,373.22	26,657.81
Certificates of registration	1,857.00	894.00	3,533.00	6,284.00
Matadero tax	15,882.16	13,631.53	15,654.41	44,668.10
Market tax	23,422.66	22,049.16	25,591.41	71,063.23
License tax	14,495.64	7,142.28	10,266.75	31,904.67
Licenses	122.70	114.70	123.70	361.10
Live-stock registration	10,569.25	2,120.00	1,658.97	14,348.22
Vehicle tax	191.12	139.47	123.80	454.39
Vehicle equipment	9,570.81	11,195.56	13,484.53	34,250.90
Municipal Court fees and fines	770.58	364.70	437.02	1,572.30
Justice of peace court fees and fines	1,143.09	752.41	758.70	2,654.20
Sheriff's fees	33.50	22.40		55.90
City Attorney's fees				

Annual statement of receipts and disbursements, in Mexican currency, etc.—Continued.

Source of revenue.	Third quarter.			
	January.	February.	March.	Total.
Rents.....	\$992.55	\$738.45	\$664.02	\$2,395.02
Miscellaneous.....	780.87	978.59	23.00	1,782.46
Pound receipts.....	376.85	261.67	202.38	840.90
Registration of cocheros.....	40.95	797.34	642.85	1,481.14
Public health fees.....		3,849.77	1,187.93	5,037.70
Total.....	183,570.50	90,315.50	103,845.53	377,731.53

Source of revenue.	Fourth quarter.				Total fiscal year 1903.
	April.	May.	June.	Total.	
Land tax.....	\$41.66	\$391.55	\$7.30	\$440.51	\$518,965.63
Industrial tax.....	50,631.66	5,600.42	5,474.46	61,706.54	306,170.90
Stamp sales.....	5,581.46	6,089.72	7,072.86	18,744.04	100,274.54
Certificates of registration.....	21,366.62	22,974.22	45,454.03	89,794.87	106,870.87
Matadero tax.....	14,467.90	14,237.11	16,886.27	45,591.28	154,423.94
Market tax.....	22,344.90	22,466.53	26,169.19	70,980.62	240,998.87
Licenses.....	7,296.95	2,042.34	11,020.48	20,359.77	157,452.89
Live-stock registration.....	144.85	100.50	78.90	324.25	1,132.65
Vehicle tax.....	8,998.71	1,656.68	1,482.75	12,138.14	39,519.36
Vehicle equipment.....	216.87	68.72	56.06	341.65	1,684.06
Municipal Court fees and fines.....	9,842.94	8,599.34	11,510.29	29,952.57	101,742.80
Justice of peace court fees and fines.....		814.84	457.83	1,272.67	4,179.60
Sheriff's fees.....	791.18	666.91	702.78	2,160.87	7,522.65
City Attorney's fees.....					250.70
Rents.....	837.13	934.16	672.70	2,443.99	7,984.57
Miscellaneous.....	25.00	24.00	1,081.27	1,130.27	4,324.85
Certificates of installation.....					358.81
Pound receipts.....	308.91		165.55	474.46	1,687.28
Registration of cocheros.....	210.91		366.69	577.60	2,464.17
Public health fees.....	1,028.06	1,366.31	1,231.16	3,625.53	8,663.23
Total.....	144,135.71	88,033.35	129,890.57	362,059.63	1,766,672.37

See consolidated statement for estimated collections during fiscal year 1904 and total for fiscal year 1902.

DISBURSEMENTS.

Deposited with Treasurer:

First quarter—	
August.....	\$112,935.46
September.....	190,555.68
Total.....	303,491.14
Second quarter—	
October.....	242,296.31
November.....	219,257.50
December.....	233,178.96
Total.....	694,732.77
Third quarter—	
January.....	203,491.38
February.....	93,818.30
March.....	96,215.06
Total.....	393,524.74
Fourth quarter—	
April.....	143,655.32
May.....	96,395.67
June.....	119,329.99
Total.....	359,380.98
Total fiscal year 1903.....	1,751,129.63

See consolidated statement for estimated expenses during fiscal year 1904 and total for fiscal year 1902.

Statement showing tariff of daily fees collected for occupying space in public markets.

Market.	Beef, pork, fish (dried and fresh), oysters, cigars and cigarettes, knickknacks.			Ready-made clothing of all kinds.			Dry goods.			Porcelain, chinaware, etc.			Groceries of all kinds.		
	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.
Divisoria	256	140	\$2.10	49	49	{ \$2.10 2.80 }	75	75	{ \$4.20 5.60 }	13	13	{ \$2.10 3.50 }	29	29	{ \$3.50 4.20 2.10 2.80 }
Quinta	192	114	2.10	19	18	{ 2.80 3.50 }	38	36	3.50	6	6	2.10	60	67	2.10
Arranque	74	59	{ 2.80 2.10 }	32	32	2.10	10	10	5.60	---	---	2.10	32	27	2.10
Anda	96	9	2.10	12	7	2.10	12	---	2.80	---	---	2.10	40	7	2.10
Sampaloc	3	3	{ 1.05 1.75 }	---	---	---	---	---	---	---	---	---	10	10	{ .70 1.05 1.75 2.80 5.25 2.10 }
Herran	20	15	1.75	6	1	2.10	6	3	2.10	3	---	2.10	20	6	---
Market.	Rice, cooked food, vermicelli, butter, etc.			Vegetables, fruits, etc.			Fancy goods, knickknacks, notions, etc.			Shoes, eggs, etc.			Cooked food, dried fish.		
	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.	Number of stalls.	Stalls rented.	Amount of fees collected.
Divisoria	31	31	{ \$2.80 2.10 3.50 }	152	104	{ \$2.10 2.80 3.50 }	27	27	{ \$2.10 2.80 }	15	15	{ \$4.20 2.80 3.50 }	---	---	\$2.10
Quinta	34	20	{ 2.10 3.50 }	40	30	3.50	---	---	2.80	---	---	{ 2.10 3.50 }	---	---	2.10
Arranque	10	8	{ 2.10 2.80 }	35	8	2.10	---	---	2.10	---	---	2.10	---	---	2.80
Anda	30	3	2.10	10	---	2.10	---	---	2.10	---	---	2.10	---	---	2.10
Sampaloc	1	1	1.40	6	6	{ 1.40 1.75 1.75 }	2	2	{ 1.05 1.40 }	---	---	---	---	---	1.40
Herran	8	---	1.75	21	4	1.75	---	---	2.10	---	---	---	---	---	---

Volante fee collected daily.

Market.	Vo- lantes.	Fowls, per basket.		Veget- ables, eggs, and fruits (high bas- kets, 60 cm.). ¹	Fish, per bas- ket (80 cm.). ¹	Vegetables, eggs, and fruits (head baskets). ¹			Cas- cos. ²	Ban- cas. ²
		70 cm. ¹	1 m., 50 cm. ¹			60 cm. ¹	70 cm. ¹	90 cm. ¹		
Divisoria	1,600	\$0.05	\$0.10	\$0.10	\$0.12	\$0.03	\$0.05	\$0.10		
Quinta	600	.05	.10	.10	.10	.03	.05	.10	1	1
Arranque	310	.05	.10	.10	.10	.03	.05	.10		3
Anda	50	.05	.10	.10	.10	.03	.05	.10		
Sampaloc	115	.05	.10	.10	.10	.03	.05	.10		1
Herran	120	.05	.10	.10	.10	.03	.05	.10		3
Sta. Ana	50	.05	.10	.10	.10	.03	.05	.10		
Tetuan	35	.05	.10	.10	.10	.03	.05	.10	1	6
Bay	50	.05	.10	.10	.10	.03	.05	.10	1	42
Estero	60	.05	.10	.10	.10	.03	.05	.10	3	7

¹ Greatest diameter.² Rate, $\frac{1}{4}$ cent per square meter daily.

Fixed-stands fee collected in advance.

Fish stalls are all rented as volantes. They appear in the first column under beef, pork, etc., as stalls in market. In Divisoria there are 102 fish stalls, in Quinta 42, and in Anda 48.

Liquor licenses in effect June 30, 1903.

District.	First-class bar.	Second-class bar.	First-class restaurant.	Second-class restaurant.	First-class hotel.	Second-class hotel.	First-class wholesale.	Second-class wholesale.	Third-class wholesale.	Distillers.	Brewers.	Theaters.	Druggist.	Grocery.	Native wine.	Total.
Business districts:																
Binondo	17	6	14	8	2	1	45	2	4	2		1	1	66	292	459
Quiapo	13	2	6	3			7							10	97	140
Santa Cruz	7	1	2	3			1		1	1				1	177	194
Mixed districts:																
San Miguel	1		1				1			1	1				39	44
Intramuros	11		7	1	2		4						1	5	42	73
Sampaloc	5	54	1						1						59	120
Tondo	1						1		1	3				3	318	327
Residence districts:																
Ermita	2			1										1	27	31
Malate	2			1											6	9
Paco	2									1					73	76
Pandacan															21	21
Santa Ana															17	17
Total	61	63	31	17	4	1	59	2	7	8	1	1	2	86	1,168	1,511

Liquor licenses prohibited in parts of these districts by Act No. 709 of the Philippine Commission.
 First and second-class bar licenses prohibited by resolution of Municipal board.
 Bar license prohibited in parts of districts by authority of Manila Liquor License Act.

REPORT OF CITY SUPERINTENDENT OF SCHOOLS.

SUPERINTENDENT OF SCHOOLS,
Manila, P. I., September 1, 1903.

GENTLEMEN: I have the honor to submit the following report of the public schools of the city of Manila for the fiscal year ending June 30, 1903, and for the months of July and August, fiscal year 1904.

That portion of the report included between dates July 1, 1902, and June 30, 1903, is based upon information contained in reports submitted by former city superintendents. The balance is based on personal observation and experience.

The attendance in both day and night schools during the past year has not been satisfactory. It began in July, 1902, with an enrollment of 2,974 and an attendance of 2,175 in the day schools and an enrollment of 1,886 and an attendance of 1,432 in the night schools. At the close of the school year, March 20, 1903, the enrollment in the day schools was 3,458 with an attendance of 3,093 and an enrollment of 1,933 and attendance of 1,508 in the night schools.

The following tables will indicate the actual condition:

Month.	Day schools.			Night schools.		
	Enroll- ment.	Attend- ance.	Per- cent of attend- ance.	Enroll- ment.	Attend- ance.	Per- cent of attend- ance.
1902.						
July	2,974	2,175	83	1,886	1,482	82
August	3,080	2,195	80	1,855	1,451	82
September	2,979	2,358	84	1,928	1,613	76
October	3,116	2,614	87	2,021	1,595	77
November	3,212	2,655	89	1,886	1,591	83
December	3,158	2,522	85	1,943	1,369	79
1903.						
January	3,332	2,566	87	2,104	1,489	82
February	3,505	2,964	91	2,044	1,742	75
March	3,458	3,093	92	1,933	1,508	82
June	3,046	2,341	92	2,626	1,907	88
July	3,574	3,276	90	2,574	2,019	80
August	4,273	3,950	92	3,314	2,677	82

A number of causes are indicated in reports of former city superintendents as having been responsible for this condition. My term of service beginning June 6, 1903, has not been sufficiently extensive to justify the expression of an opinion as to the facts of the case. During the past two months the attendance has been materially increased and is

still increasing. The work began on July 15 after the long vacation with an enrollment of 3,046 and an attendance of 2,341 in the day schools and an enrollment of 2,626 and an attendance of 1,907 in the night schools. Present enrollment is: Day schools, 4,273; night schools, 3,314. Attendance is: Day schools, 2,950; night schools, 2,677. Notwithstanding this fact the attendance is small in proportion to the population. This condition will exist until radical improvements in the condition of school buildings have been made. The Filipino in his present condition is not easily impressed with the merits of an educational institution conducted in an ordinary cheap dwelling house, as is the case with many of our schools.

New, modern, and commodious school buildings are necessary in all parts of the city. In some parts they are indispensable. In that portion of Trozo lying beyond Azcarraga is a population of perhaps 50,000 without a school of any kind. The houses in this district are built of nipa and are not available for school purposes. Nearly every school building in the city is overcrowded. In some cases it has been found necessary to use rooms which are entirely unfit for occupation. Numerous exercises for pupils are rendered impossible by this lack of accommodations. In several cases school buildings are unsanitary in the extreme.

The following changes in buildings were made: Discontinued, 6; secured, 5.

SCHOOLS.

The public schools of Manila are divided into five classes—kindergartens, elementary schools, secondary schools, night schools, and teachers' normal—in the following proportion:

Kindergartens	4
Elementary schools	34
Secondary schools	2
Teacher's normal	2
Night schools	23

KINDERGARTENS.

This work, under the direction of Miss Kate L. Bassett, has been established upon a substantial basis and has proven satisfactory. Each kindergarten is in charge of an American subdirector who is a trained kindergartener. In the American kindergarten the assistants are Americans. In the Filipino kindergartens they are natives. Equipment and plans are modern. The Filipino children take an active interest in the work and develop rapidly. I believe that the experiment will be entirely successful.

ELEMENTARY SCHOOLS.

Elementary schools are in operation in Tondo, Binondo, Trozo, Gagalangin, Santa Cruz, Quiapo, Sampaloc, Santa Mesa, San Miguel, Con-

cepcion, Intramuros, Ermita, Malate, Singalon, Paco, Pandacan, Beata, and Santa Ana.

The work in these schools is in a decidedly healthy condition. Interest of pupils and teachers is active and increasing. Developments of pupils along the lines of study is rapid and reasonably symmetrical. It has been clearly demonstrated that the Filipino possesses both disposition and ability to learn English. Certain undesirable conditions still exist in these schools. I know of none, however, which can not be improved within a reasonable time. The most serious, defective buildings, has already been noted. Other objectionable features are that the schools are not properly or uniformly graded. No definite course of study exists. The entire system is without correlation. No plan exists whereby students may be transferred from one school to another. Pupils do not seem to recognize obligation to attend any particular school, but move from district to district as the whim may direct. Months will be required before these differences can be obviated.

SECONDARY SCHOOLS.

Secondary schools have been established in Sampaloc and Tondo. The Sampaloc school opened August 11 and at present has an enrollment of 193. The Tondo school was opened August 20 and at present has an enrollment of 101. The work in both of these schools has been successful, that in Sampaloc particularly so. The present teaching force of this school consists of six American and two native teachers and the principal, Mr. F. R. Lutz. The teaching force in the Tondo school consists of four Americans and the principal, Mr. Clinton. The course of instruction covers six years, two years for preparatory and four years for regular secondary work.

The following course of study has been decided upon for the regular course:

First preparatory.

- | | |
|---|--|
| (1) English; until able to write a letter reasonably correct. | (3) Reading; friends and helpers. |
| (2) Reading; Arnold's Third. | (4) Arithmetic; fractions and percentage and their applications. |
| (3) Arithmetic; as far as division of fractions. | (5) Spelling. |
| (4) Geography; one-half year oral, then Frye's Geography. | (6) Drawing and music. |
| (5) Music and drawing. | |

High-school course.

Second preparatory.

- | | |
|---|---|
| (1) English; Complete Mother Tongue, Book II. | (3) United States and Philippine history. |
| (2) Geography; an advanced political completed. | (4) Physical geography. |
| | (5) Physiology. |
| | Elective: Spanish. |

Second year.

- (1) Algebra; as far as quadration.
- (2) Rhetoric and composition.
- (3) Universal history.
- (4) Botany.
- (5) Latin.

(6) Music and drawing.
Electives: Zoölogy and Spanish.

Third year.

- (1) Algebra; quadratics, radicals, and geometry.
- (2) American literature.
- (3) Universal history.

- (4) Physics.
 - (5) Latin.
 - (6) Music and drawing.
- Electives: French and German.

Fourth year.

- (1) Geometry.
 - (2) English literature.
 - (3) Civics.
 - (4) Chemistry.
 - (5) Latin.
 - (6) Drawing and music.
- Electives: French, German, trigonometry.

In addition to this regular course special instruction is offered along business and commercial lines. These schools reach a class of students formerly not administered to by the public schools of the city. Grammar schools as formerly existing were not entirely satisfactory because conducted as advanced features in elementary schools.

The secondary school conducted as a separate and complete institution reaches a class not otherwise available. At least one more secondary school is a present necessity. The lack of American teachers makes its immediate establishment impossible.

NIGHT SCHOOLS.

The condition of night schools is most gratifying. The interest of adult natives in the work offered is all that can be desired. These schools, twenty-three in number, are filled to their utmost capacity. New classes are being opened almost weekly. Present accommodations are far from adequate, and hundreds of students have been turned away because of this fact. This condition is being rapidly overcome, and we shall soon be able to accommodate all available candidates. The students in these schools range from 14 years of age upward. Almost every profession, trade, line of business, and condition of life is represented. The standards of these schools are being raised, and many teachers have been discontinued because of inadaptability. Many of the night-school teachers are employees in various bureaus of the Government and have had no normal training or experience. Only the best are retained.

NORMAL SCHOOLS.

These schools, two in number, located in Paco and Sampaloc, are established for the purpose of furnishing regular normal training to native teachers employed in the city schools. The course of study covers a period of three years and includes branches taught in regular normals. In order to make this course a possibility it has been found necessary to confine the instruction of pupils to a long session in the morning and to devote the afternoon to instruction for teachers. A definite course of

study has been prepared and shall be closely followed. Each normal is in charge of a principal who directs the work. The work of instruction in these normals is performed by the regular American teachers, each teaching for a period of two months.

TEACHERS.

The work of American teachers is, in general, very satisfactory. That of many of them is extremely so. Defects existing in the city schools are almost entirely due to conditions over which the teacher has no proper control. The conditions in a very few schools would indicate that the teachers have not done all that might be reasonably expected. I am not at all certain, however, that even in the few cases included the teacher is to blame. So arduous have been my office duties that I have not been able to give nearly proper time and attention to the work of inspection. As a result I am at present unable to severely criticise the work of any teacher. It is my impression that a great many of the city teachers are overworked. Forced by circumstances to live in districts far distant from their schools and to work in buildings the sanitary condition of which is bad, the health of these teachers is subjected to a severe test. The salaries of these teachers are, with a few exceptions, too low. The general average, directors and secondary principals excluded, is \$90. So great is the expense of house rent, subsistence, and transportation to schools that simple necessity forces many to teach in night schools at a sacrifice of health and effort in the regular day schools.

NATIVE TEACHERS.

The native teachers of Manila may be divided upon a basis of ability into seven classes. The work of the lowest class is only fair, due in some cases to an imperfect knowledge of English, in others to a lack of training, and in others to defects inherent in the individual. The work of the highest class is splendid. This class includes about twenty teachers. I see no reason why, with proper training, these teachers may not be brought to a reasonably high standard of proficiency. They work faithfully. Their efforts are well directed and productive of proper results. Their interest in the work is all that could be wished. They are tactful and agreeable. Their desire to advance is strong. The slightest suggestion offered by the American teacher is carried to its limit. In general the efforts of these teachers, as far as they presume to go, place them in a fairly high class. Several of these teachers have been promoted to positions ordinarily supposed to require qualities confined to American teachers. In this experiment we are meeting with success. Guillermo Santos has been placed in full charge of the Calle Lemery school containing more than 500 pupils and 19 teachers. Ramon Ochoa and Andrea Vitan have been placed in charge of classes in the Sampaloc secondary school. Other teachers will be promoted as rapidly as conditions will permit.

The salaries of native teachers average \$35, gold. As at present constituted the native teaching force of the city is divided into fourteen classes, represented by as many different grades of salaries. It is my intention to reduce this number to seven. With the increases which accompany the change in classification indicated, a satisfactory basis will have been established. The salary schedule under proposed classification is as follows: Six teachers, at \$60; 6 teachers, at \$55; 6 teachers, at \$50; 8 teachers, at \$45; 29 teachers, at \$40; 63 teachers, at \$35; 30 teachers, at \$30; average salary, \$37, United States currency.

IMPROVEMENTS.

Effected during present school year.—Secondary schools: Secondary schools established in Sampaloc and Tondo. Kindergartens: Kindergartens established in San Nicolas, Sampaloc, and Intramuros for Filipino children and in Ermita for American children. Drawing: A full course in drawing, compulsory in all grades, with an American director and 6 native assistants. Music: A course in vocal music, compulsory in all grades, with an American director and 2 assistants. Teachers: An appropriation for 50 additional day-school teachers and 35 additional night-school teachers. Principals: An appropriation for 6 additional night-school principals. Night schools: New night schools opened in Tondo, Trozo, Santa Cruz, Quiapo, Sampaloc, Concepcion, Malate, and Santa Ana.

In progress.—School buildings: Modern school buildings in Tondo, Trozo, and Malate. Drill: Introduction of military drill (foot movements and setting-up exercise) into all schools. Normal course: A full course of normal instruction for native teachers. (This course will lead up to a form of certification similar to that of a regular normal school.) Course of study: A complete course of study and a thorough grading of schools. School districts: Definite establishment of district boundaries and a system of transfer whereby pupils may be transferred from one district to another. Classification of native teachers: A proper classification of native teachers whereby the 14 classes now represented by as many different salaries may be reduced to 7. Kindergartens: Establishment of four additional kindergartens. Chinese school: Establishment of second Chinese school.

Proposed.—Buildings: New school buildings to be erected in the school districts of San Nicolas, Santa Cruz, Quiapo, Santa Mesa, San Miguel, Concepcion, Ermita, Malate, Paco, and Sampaloc. Transportation: City transportation for directors of special subjects. Office quarters: Proper office quarters for City Superintendent. This includes accommodations for directors of music, drawing, and kindergarten. Office force: The services of a stenographer are absolutely indispensable.

Statement of expenses during fiscal year 1903.

Salaries:

Office force	\$8,760.00
Native teachers	132,302.53
Night-school teachers	56,542.94
American teachers (estimated, paid from insular revenue)	75,000.00

Contingent expenses:

Salaries of janitors (paid by Engineer Department)	4,800.00
Books and supplies (estimated, paid from insular revenue)	15,000.00
Office supplies and labor	2,964.96

Total	295,370.43
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Respectfully submitted.

G. A. O'REILLY,

Superintendent of Schools, Manila.

The MUNICIPAL BOARD,

Manila, P. I.



Bahay Pare

Bitas Channel

Bitas

Gagalangin

Lico

Tayuman

Calero

Palumpung

Bangcusa

Bancaso

Tutuban

Dulunbayan

Sulucan

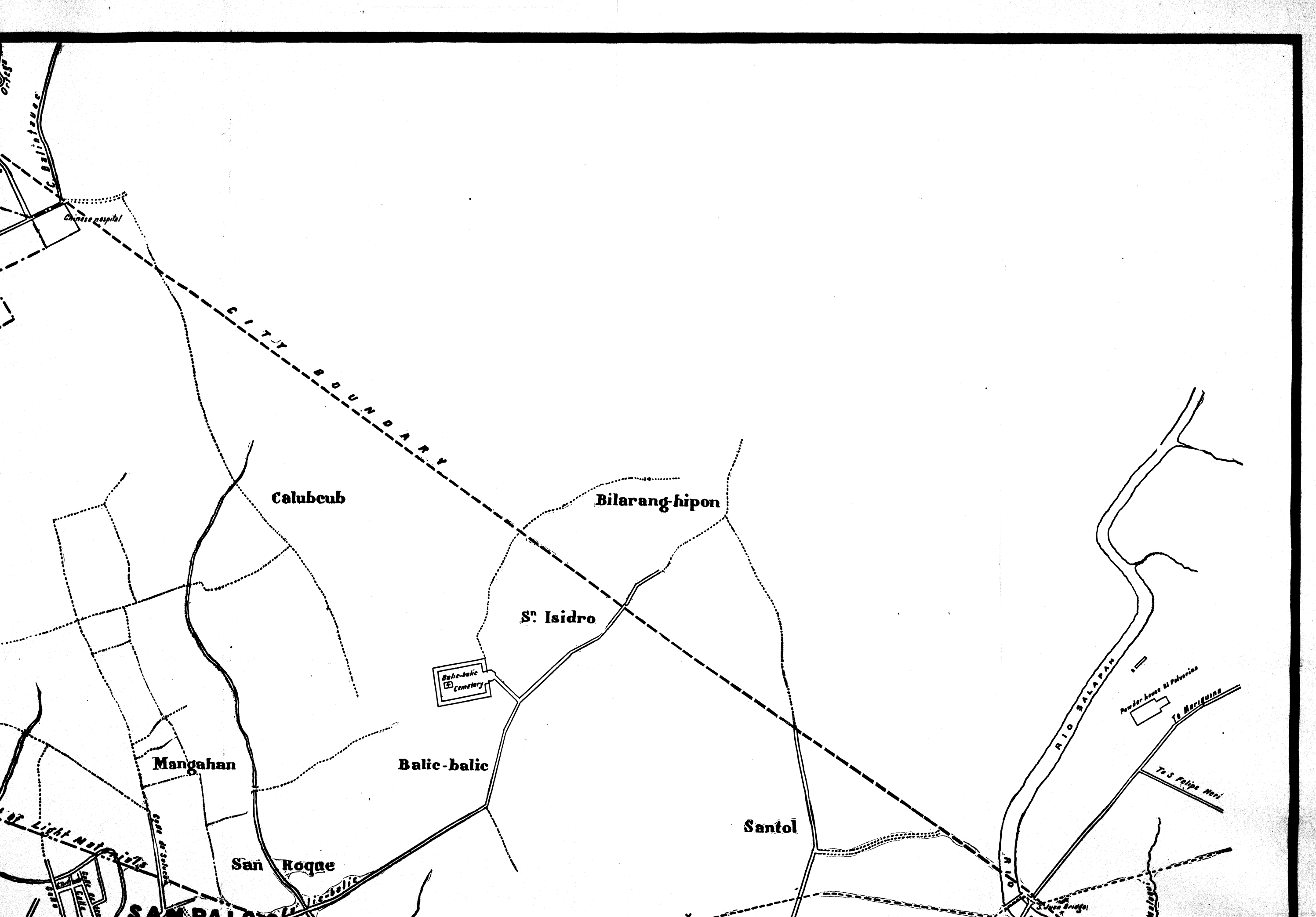
Mangahan

San Roque

SAN PALO

B

A



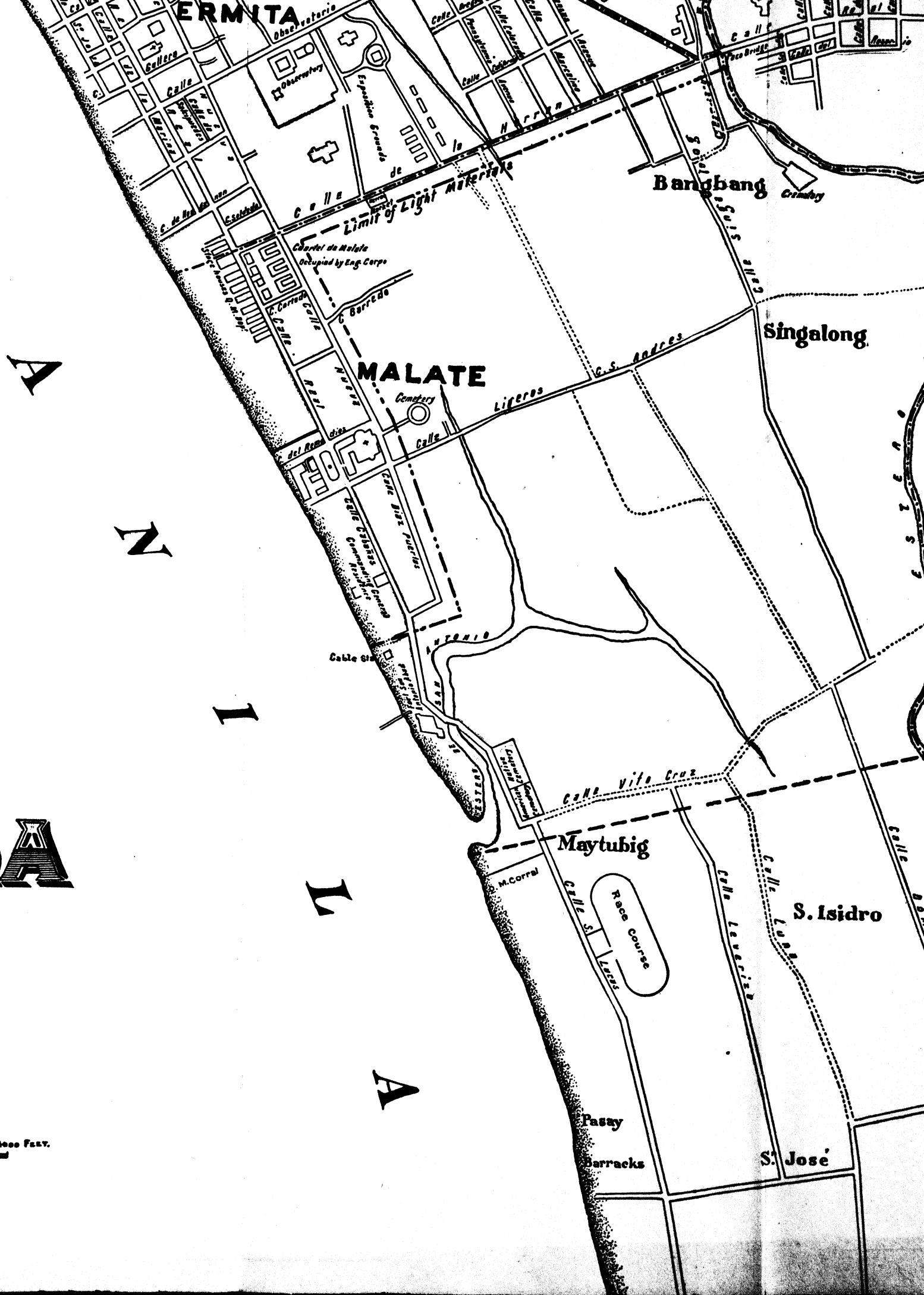


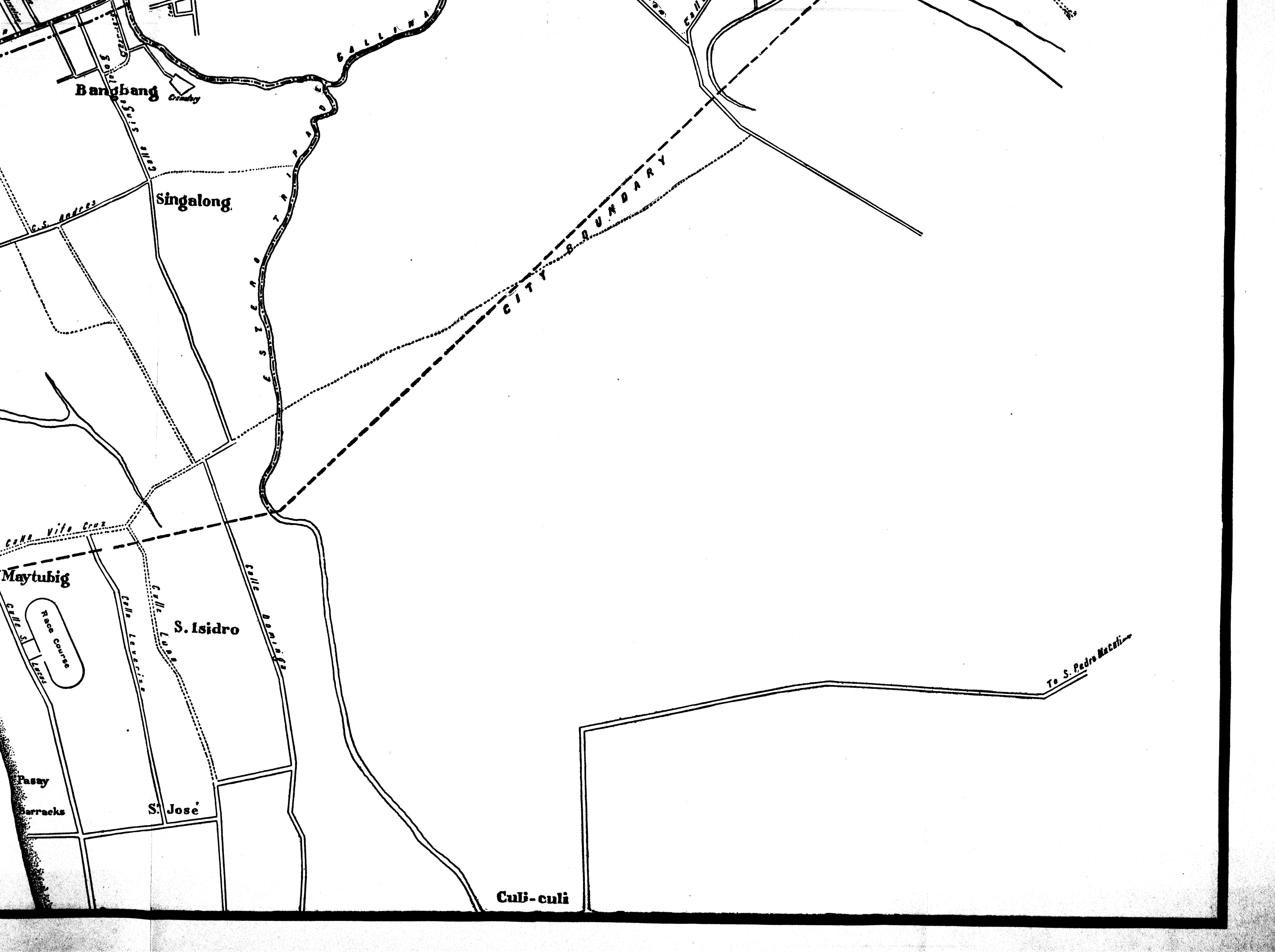


MAP
— OF THE —
CITY OF MANILA
AND
VICINITY.

—Scale 1:11000—
1000 2000 3000 4000 FEET.

1903





Bangbang

Singalong

Maytubig

S. Isidro

S. José

Culí-culí

To S. Pedro Macati